Rural Environment. Education. Personality. (REEP)

Proceedings of the 8th International Scientific Conference

No. 8
ISSN 2255-808X

Dedicated to the 15th Anniversary of Institute of Education and Home Economics

Latvia University of Agriculture
2015
Jelgava

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Rural Environment. Education.Personality (REEP) (2015). Proceedings of the International Scientific Conference. Volume 8, 15th - 16th May, 2015, LLU, Jelgava, Latvia, pp. 434.

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Cover design - Natalja Vronska

ISBN 978-9984-48-179- 1
ISSN 2255-808X

Abstracted/Indexed: The Proceedings after the conference will be submitted for publishing in databases: Thomson Reuters Web of Science, SCOPUS, EBSCO, CAB Abstracts, AGRIS.

The data bases select the articles from the Proceedings for including them in their data bases after additional individual qualitative estimation.

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DIDACTICS OF ENGINEERING SCIENCES, USAGE OF IT

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15th Anniversary of the Institute of Education and Home Economics

The main objective of The Institute of Education and Home Economics (IEHE): promote sustainable development of qualitative life environment having nowadays level academic resources, developing scientific, educational and advising potential on international level; prepare competitive specialists mainly for work in rural areas in the field of education and career guidance.

IEHE was established in 2000 on the basis of the Department of Pedagogy and handicraft's part of the Department of Nutrition and Household.

Latvia University of Agriculture took the traditions of Kaucminde School of Home Economics and started the programmes of home economics teachers in 1990.

The Department of Pedagogy at the Latvian Agricultural Academy (LLA) (Latvia University of Agriculture - since 1991) was established in 1944 and one of its first leader's was one of the founder's of the science of pedagogy in Latvia Jūlijs Aleksandrs Students. Active pedagogical researches started at the Faculty of Mechanization in the sixties of the 20th century because LLA was a leading one among the former Soviet Union's higher agricultural education establishments in the field of professional development. There were organised courses of professional development for teachers of agricultural schools and technical schools, teachers of higher agricultural education establishments as well as regular courses in pedagogy for LLA teachers. It was a basis for renewal of the Department of Pedagogy under the guidance of professor Ludis Pēks in 1989.

The Institute of Education and Home Economics guides five programmes in the study direction "Education, pedagogy and sports". IEHE offers: a Professional Bachelor's study programme in pedagogy (B. ed.) with qualifications of teacher of home economics and technologies and informatics in basic education or teacher of visual art, Academic Master's study programme in pedagogy (Mg. paed.), Professional Master's programme in education (Mg. ed.) with a qualification of career counsellor, first level study programme with a qualification of teacher of professional education and a doctoral study programme in pedagogy (Dr. paed.). The Institute offers courses for professional development, e.g. Pedagogical Basics, Technologies in Methodology of Household, Counselling and Supervision of Pupils' Scientific Research, Innovations in Didactics of Higher Education et al.

IEHE implements researches in the directions of professional and career education, life quality in the context of home environment and didactics of engineering education. Investigations in ecology of education, development of competence, home economics serve as a research theoretical basis of many studies of the Institute.

The scientific research conference *Rural Environment. Education. Personality.* is organized by IEHE annually. The conference proceedings are indexed in Web of Science et al. data bases.

International activities comprise participation in the following entities: European Network of Learning and Teaching in Agriculture and Rural Development (ENTER); International Federation of Home Economics (IFHE); International Society for Engineering Education (IGIP); Baltic and Black Sea Circle Consortium (BBSC); European Network of Consumer Educators (ENCE); Network of Career Counselling and Guidance Programmes at Higher

Education Institution in the Nordic and Baltic Countries (VALA), Network for Innovation in Career Guidance and Counselling in Europe (NICE) et al.

The Institute is experienced in international scientific and ESF projects and Erasmus and programme. IEHE cooperates with colleagues from Austria, Belarus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Lithuania, Malta, Turkey and other countries.

There is more than a decade long cooperation with the *Journal of Science Education* and *Career Designing: Research and Counselling.*

IEHE cooperates with the Latvian higher schools and colleges in common projects, students' competitions in pedagogy, implementation of study programmes, scientific reviewing of doctoral theses, working in promotion and professor councils, organising of scientific conferences and publishing scientific research results.

IEHE cooperates with Zemgale Planning Region, Zemgale Regional Competence Development Centre and education boards of Jelgava and districts in the field of scientific research, counselling and assessing pupils' scientifically research papers, running courses of professional development and in local and international projects.

Scientific research and academic work is ensured by providing the academic staff and students with modern study equipment: computers, multimedia and Internet. Rooms are equipped with interactive whiteboards and multimedia (all rooms) with wireless Internet connection. Students can use computers with Internet connection and software necessary for studies in the computer lab and Information centre of the Institute of Education and Home Economics. There are about four thousand sources in pedagogy, psychology, career guidance, home economics, IT and art in Latvian, English, Russian and German languages in IEHE Information Centre.

The institute's common space is about 1300 m^2 including lecture rooms, a conference hall, a computer lab, an exhibition hall, rooms for weaving, textiles, handicraft, drawing and painting. There are also rooms for practical works in psychology and career counselling.

The Institute's staff members photo and list is below the article.

Professor Baiba Briede
Head of Institute of Education and Home Economics
Faculty of Engineering
Latvia University of Agriculture

The first row from the left: lecturer Ligita Ozolniece, main specialist Lidija Pudāne, assist. prof. Aija Pridāne, assoc.prof. Regīna Baltušīte, lecturer Inga Andersone, prof. emeritus Anita Aizsila, head of the Institute of Education and Home Economics professor Baiba Briede, prof. emeritus Ludis Pēks, assist. prof. Iveta Līce.

The second row from the left: assoc.prof. Irēna Katane, lecturer Anda Zvīgule, lecturer Guna Gaiķe, lecturer Zane Beitere-Šeļegovska, lecturer Sivija Reihmane, main specialist Sandra Zenēviča, lecturer Inita Soika, assoc. prof. Vilnis Tomsons, head of the laboratory Pēteris Lagzdiņš.

The third row from the left: lecturer Jānis Pāvulēns, laboratory assistant Jānis Balders, assoc.prof. Vija Dišlere, assist. prof. Nataļja Vronska, lecturer Ivanda Spulle-Meiere, lecturer Vizma Slava, lecturer Inta Paulsone.

In Memoriam of Tālivaldis Sēja 60 Years

16/02/1955 – 27/02/2009

Tālivaldis (colleagues and friends called him *Tāli*s lovely) started his pace at our *Alma Mater* more than forty years ago as a personality with experience and temper from childhood, Priekuļi Technical School and army. Tālivaldis graduated from the Faculty of Agricultural Mechanization of the Latvian Academy of Agriculture (LLA) as a specialist of Agricultural Mechanization obtaining an engineer-mechanic qualification in 1982. During the study period Tālivaldis had been the 150 persons mechanised student group's leader. He also worked as an instructor in the Department of Training for Production thus starting his pedagogical work.

Tālivaldis completed studies with an excellent diploma paper in which he revealed the correlation between the study results and success of those graduates who had become managers. The study done by him was close to the level of doctoral thesis.

The gained experience and maturity of personality was a strong basis for Tālivaldis to become a deputy head of agro state farm "Āraiši" very soon after graduation from LLA. He was assessed very positively in that post and Tālivaldis was moved to one of the most complicated agricultural state farms into one of the most beautiful places of Latvia – Zaube, and he had been leading it from 1984 until 1992.

He continued to work in the field of education during the independence of Latvia. At first he had been working as a teacher at Zaube Basic School and Cēsis Evening Secondary School for ten years. Tālivaldis developed his personality very purposefully and in a result he knew four foreign languages. At the same time he also did the Master's degree studies in Pedagogy and then studied in the Doctoral Programmes of Pedagogy and Economics.

Tālivaldis worked as a lecturer at the Institute of Education and Home Economics of Latvia University of Agriculture (LLU) from 1997 as well as educated specialists of motor vehicles. Tālivaldis defended a Doctoral Thesis on the development of vocational education in the regions of Latvia for getting a doctoral degree of Economics (Dr. oec.) in the field of Regional Economics in 2008. Two life dominants of Tālivaldis have merged in the Thesis - education and rural environment. That entity proved also importance of interdisciplinary approach in researches.

Tālivaldis was one of the pioneers of implementing career guidance and counselling in the education system of Latvia. Already in 1998/1999 academic year under his leadership the optional study course "Study Advisor" was offered for students of all faculties of LLU, but

from the 2001/2002 academic year – the course "Study Counsellor" in which studied more than a hundred students during the four study years. The graduates of that study course were dubbed as *tutors* in the study environment of LLU, who helped to solve the problems of adaptation of first-year students and career problems of young professionals. Tālivaldis had been leading two activities in the project of EU Structural Funds from 2005 to 2008 on provision of career education programs in the education system of Latvia which was included in the National Programme "Support for Vocational Guidance and Career Education in the Education System" and which resulted by launching an unprecedented professional Master's study programme "Career Counsellor" in our country. The first students were enrolled in September 2007.

He was also a member of the Council of The Faculty of Engineering. He supervised the Master's theses and ran study courses on the labour market and the education systems in the European Union actively. His scientific work was in the fields of vocational education, career guidance and education policy.

Tālivaldis loved his fatherland, his own family and *Alma Mater* deeply. His three children and the role of the grandfather as well as his self-created and cultivated family house surrounded by stately spruce were a source of inspiration to all of his expectations. With fortitude and with natural rye bread and honey of Vidzeme he said the true force words to the first students of the Master's Study Programme "Career Counsellor". So the Programme is always associated with Tālis.

The life of our dear and talented colleague could not be imagined without singing in the Latvian National Men's Choir. The voice of Tālis will continue to sound in the records of concerts of the Latvian Song Festivals.

We should not lose desire and willpower to pause in our everyday hurry and think over how Tālis would had been behaving. We know that Tālis did not like to stand by and watch. No wonder that he really liked the dictum of Chinese: "When the wind of change blows, some build walls, others build windmills".

His vital life energy, responsibility, courage and dignity continue to create the good in us, and it is the eternity power of Tālis.

The authors: professor Ludis Pēks, professor Baiba Briede,
lecturer Inita Soika and lecturer Anda Zvīgule

Foreword

The Institute of Education and Home Economics of the Faculty of Engineering, Latvia University of Agriculture organizes annual international scientific conferences **Rural Environment. Education. Personality (REEP).** Authors of the articles are from 7 countries - Czech Republic, Estonia, Germany, Kazakhstan, Latvia, Lithuania, Nigeria. Totally 24 educational establishments are represented in the Proceedings

The Institute of Education and Home Economics of the Faculty of Engineering, Latvia University of Agriculture, organized the annual international scientific conference Rural Environment. Education. Personality (REEP-2015). Authors of the articles are from 8 countries - Czech Republic, Estonia, Latvia, Lithuania, Nigeria, Poland, Slovenia, Turkey, Totally 25 educational establishments are represented in the Proceedings.

Aim of the Conference: to look for solutions, exchange ideas and highlight topical problems on the 21st century education tendencies in the context of ecology of education, competence, life quality in home environment, psychology, didactics of engineering science, usage IT, development of professional education and career, foreign languages for professional and academic purposes.

Thematic groups of the articles:

- Ecology of education: ecological approach in education.
- Education for getting competence.
- Life quality in the context of home environment, home economics, household, visual art.
- Development of professional education and career.
- Psychology.
- Didactics of engineering sciences, usage of IT.
- Foreign languages for professional and academic purposes.

The Conference focuses on perspectives of education and training systems considering changes in rural social environment imposed by changes in a society both in global and local scope.
The scope of **ecology of education** covers themes on pedagogues' efforts and contribution on competitiveness of companies which to a great extent depends on the competitiveness of each employee as a specialist, therefore it is important to evaluate specialists' competitiveness and promote their growth. A modern competitive specialist is characterized by the following qualities/indications: 1) the indicators, characterizing personality's self-conception; 2) well-developed self-regulation and self-management; 3) different competences, including professional competency; 4) personality's orientation, including purposes of life and career, motives, attitudes, values, responsibility etc. The methodology for the evaluation of staff's competitiveness was usedto evaluate the staff's competitiveness at one of the International Insurance Agencies in Latvia according to several indications of competitiveness. There were two parts of research: 1) the evaluation of specialists' competitiveness; 2) elaboration of Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise.

The factor of the success of performance of hospitality companies is competitive, professional staff, which can ensure successful communication with customers and provide qualitative services. One of the most important indicators of a specialist's competitiveness is his or her competency. The theoretical research focused on the field of Ecology of Education and Concurrentology. The main conclusion was that the structure of the competitiveness of a prospective manager of Hospitality Company consists of three components: personality and professional progress, self-management and the competence component of the environment of professional activities. The model of the competitiveness of the prospective managers of hospitality companies was worked out.

The development of modern science and technology has completely changed the environment and public and interpersonal relationships. Nowadays natural resources are used more intensively than ever before. Human impact on nature has reached global dimensions. This means that in the future much more attention should be paid to the rational use of natural resources and it is encouraged

already during a pre-school aged child's development to raise their awareness of nature conservation. The authors of the article emphasise that children are interested in exploring nature, learning about our national traditions and folklore heritage on the conservancy of nature and work ethics under the guidance of skilled teachers and parents.

Another research concludes that a child cannot adapt herself/himself to the school's learning process, if there is no social environment suitable for children, i.e., there is no appropriate pedagogical assistance provided according to a child's needs, experience and possibilities.

Children research and cognitive skills development was explored in Riga pre-school education institution "*Madariņa*" where outdoor education is integrated in the curriculum. Outdoor education helps in children physical, mental, emotional, social and intellectual development. Close connection with nature also helps to benefit from nature and its beauty. The aim of the study was theoretically and practically investigate the role of outdoor education in development of children research activity in pre-school age (3- 7 years).

Education for getting competence focuses on competence based education for sustainable development of the society that becomes more and more topical in the modern globalized society when the technologies develop rapidly, when all the branches of national economy modernize and the style and environment of every person change. One of the factors that will allow the society to develop continuously and successfully is education which includes competence approach, the development of problem solving skills and critical thinking skills. They are topical today in the improvement of the education content. After historically implemented reform of education content in Latvia it becomes more diverse, differential and flexible, more corresponding to the demands of the modern environment and the national strategic aims.

Education plays a crucial role in the success of European political integration. That includes educational strategies that recognize diversity, protect shared ideals, accept the differences as well as promote a mutual understanding and tolerance. According to international and national policy documents an 'ideal' member of society has developed good cooperation and communication skills as well as tolerance towards different social groups. The international project "Solidarity Schools in the Baltic States" for the school age youth (ages 13-19) wascarried out in Latvia, Estonia and Lithuania with the focus on strengthening social tolerance.

The teachers' ICT competence in Home Economics and Technologies lessons should be improved and it is characterized by the following skills: the ability to use IT facilities, to integrate knowledge, using IT to enrich the knowledge for new learning situation modelling; the ability to use test developing programs in e–environment. Teachers' ICT competence contains both computer literacy and pedagogical proficiency, being competent in all Home Economics and Technologies topics.

One of the strategic goals of vocational education is increasing its quality and competitiveness, to evaluate factors concerning the development of determination of vocational school students and to evaluate the possibilities of promoting the development of intentional determination. It is very important that students understand learning as the process personally relevant to themselves; they create their self-experience and it is important for them be conscious of self-realization.

Student teachers' perception of teaching competences' development through teaching practice was highlighted. The student teacher should acquire several competences to be an effective and self-confident teacher. During teaching practice students should develop competences such as didactic competences, communication skills and leadership qualities. The results of the research revealed that student teachers wanted more practical teaching hours and that student teachers with more practical teaching experience emphasised the role of the mentor more in terms of the qualitative analysis of their work than the student teacher without teaching experience.

The pedagogical approach of linking theory and practice (learning by doing) is essential for successful development of entrepreneurship education. Experimental teaching was conducted at two universities in Prague which main objective was to develop entrepreneurial skills of students, namely, initiative, proactivity, creativity, presentation and communication skills and ability to work in a team using project-based learning as a suitable educational concept. The main benefit of the experimental

teaching was that students consider the project-based learning as a suitable method to develop the key entrepreneurial competencies.

Today, technology is increasingly becoming a part of our daily experience and there are domains of life where human hands have no function in the creation of a product. All this raises a question how much or whether at all one should be able to make something by hands, and, therefore, perhaps, craft as a school subject is outdated and should be replaced with the theoretical discussions about the technological processes? The content of craft education cannot be the same as it was in the beginning of the last century. New standards arise in handicraft and home economics instruction in Estonia: it is not enough for students to merely acquire skills and the ability to make something by imitation; but the whole process has to be connected with pupils' meaningful creative action, ethnic experience, innovation and modern technology. This is the direction pursued in Estonian syllabus development.

One of the paper focuses on peer learning for the development of reading literacy in general education. The program "Peer learning for the development of reading literacy" was approbated in 49 general comprehension schools for grades 5 to 7 in Latvia.

The study process in the primary school based on the cooperation between teachers and pupils was studied, the development of critical and creative thinking was investigated. The aim of research was to introduce the integrated discovery study model in educational work with pupils, create theoretically grounded integrated study content and select pedagogical means for its implementation. The readiness of future teachers to implement an integrated discovery study model for early school age pupils is basically sufficient in order to work independently. At the same time a problem is posed for students that at schools there is only a partial support and desire to change something in the organisation and planning of the traditional study process. In the further research work it would be useful to identify students' specific skills to be developed in this model.

The reality of moral value education in lessons of technologies was discussed. Contemporary technology education integrates not only creation, technology learning and practical implementation of ideas but also an individual's value education.It is important to integrate values into the processes. The specific features of the subject were emphasised: lessons were delivered in small groups, flexible composition of subject content was based on compliance between traditions and innovations. It was revealed that values of respect, honesty and responsibility were most frequently developed, whereas altruism and sensitivity were among the least often developed ones. Teachers of technologies were certain that all the programmes of technologies were appropriate for development of learners' moral values.

Distance education has been developing and improving from year to year because of the public demand. One of the articles analyses how the diversity (different types of institutions, study forms and modes) enhances accessibility of college higher education to students as well as to society, whose members aim at professional development or retraining. Though the students' attitude towards distance studies and possibilities of distance learning in different colleges has been intensively investigated in recent works of researchers, the role of distance studies as a means of professional development or retraining for society has been under-researched. Recommendations for improvement of e-learning activities seeking to address requirements imposed on higher education, developing students' competences and ensuring the paradigm of life-long learning are proposed. Generalising, it can be stated that accessibility of higher education is improved employing a wider variety of e-learning forms.

Articles on life quality in the context of home environment describe the topics on people's well-being and educational problems in school.

Scientific achievements promote rapid progression of people's well-being, but problems are observed along with positive traits. Sustainability requires a common vision of society and nature. Sustainable development can be ensured if there is a correlation between the development of national economy, social sphere and protection of nature, as well as there is an active public participation in the development. Sustainable development is characterized by three interrelated dimensions: environmental, economic and social. The education for sustainable development mainly is carried out as an interrelated subject link and it is integrated in the content corresponding to the level of education

and the specifics of every subject. The obtained results revealed that the respondents understood the essence of education for sustainable development in Latvia. Students in their stories first emphasized real events in their surroundings. They understood their responsibility and the necessity to preserve the environment. General principles of organising the field trips and the importance of the provision of modern and high-quality education were discussed. Recommendations for teachers how to organize field trips have been worked out, as well as topics and plans of field trips which correspond to the "Home Economics and Technologies" training content and the curriculum model at elementary school have been offered.

Technology Education in Lithuania is explained as a tool for creating a sustainable future. The researchers introduced pupils to historical development of technologies, relations with other sciences, evaluating the impact of technologies on the culture and social environment as well as on traditions and national identity. The subject of Technologies is an integrity of creativity and production that prepares pupils for today's modern society. The subject of Technologies in Lithuania is an appropriate educational space for the development of the culture of consumption of pupils and the concept of the quality of life.

Learning environment can be considered from several aspects, such as physical, mental, social or aesthetical. Previous studies show that different stakeholders have various opinions about a good learning environment. The learning environment for pupils creates an atmosphere where they spend a greater part of their day, while for teachers it determines pedagogical possibilities for conducting lessons. During the research mostly pupils pointed out the incongruity of the learning environment that does not enable them to fulfil the syllabus. One notable finding was that insufficient physical environment has no impact on home economics teachers' job satisfaction in Estonia.

Usage of ICT can serve as a tool for preparing *Home economics and technologies* lessons, for frontal visualization of data, as well as for organization and evaluation of students' practical work. As a result the didactic usability of ICT facilities was theoretically established. Practical tests were developed and tested in the study subject *Home economics and technologies* with a choice of textile technologies in: knitting, clothing, weaving and sewing.

The "Basic Art Education" course is also called as "*Visual Thinking*" in Art Education. It has been carried out through the adaptations of "Basic School" in Turkey. This understanding today has been questioned and the methods of creativity education have been discussed. Basic principles oriented toward finding solutions to one's own problems of an art education student, reflecting the world view perspectives into his/her productions and struggle for being able to visualize his/her own thoughts can be implemented in education.

Basic principles of adult education were applied through the process of using the learning videos (continuing education accessibility, connectivity with one's own experience, "learning by doing"); as well as adult education favourable didactic elements (learning at home and at an individual rate); an individual developed skills to see the proportions, to perceive space, to create flower compositions and to improve information technology skills. As a result an individual's horizons expanded and personal development took place. Usage of learning video created the conditions that supported relation between an individual's autonomy and competence with her/his own experience, encouraged creativity, motivation and personal development during learning process, thus improving learning outcomes.

The study investigated the determinants of dressing patterns of female undergraduate students in tertiary institutions in Abia State, Nigeria. The findings of the study among others revealed that the female undergraduate students dressing patterns are greatly influenced by imitation of western dress styles, peer/social group pressure, Mass Media, imitation of film actresses, fashion in Vogue. The findings of the study also showed among others that female students were exposed to being raped/sexual harassments, the image of the students/family were being tarnished, students being addressed as prostitutes and irresponsible, stealing, exposure to deadly diseases, e.g. HIV/Aids, were the major effects on the students. The findings also revealed that decay in human standard, spread of diseases among others are the effects of indecent dressing patterns accepted by the students. Based on the findings of this study, it was recommended among others that parents, churches, school authorities,

lecturers, media houses etc, should make both individual and joint efforts to curb indecent dressing practices in the institutions of high learning in the country.

The study explored the measures adopted by homemakers in the management of domestic energy within households in urban and rural areas of Abia State Nigeria. Specifically, the study identified the various sources of domestic energy used within households including the use of pressure pots to cook hard foods, soak cereals and pulses overnight to soften them, use thermostat to control temperature, use energy saving devices like microwave, bake large quantities of foods at a time, use dishwasher when filled to capacity, use sensors or timers on outside lights, use a timer to avoid wasting energy, do not pre heat the oven for too long, use correct size of pans, use an air conditioner an hour or less every day among others.

Improvement of the quality of life is one of the main economic policy tasks in many countries. The research topicality is being determined by the fact that quality of life and real estate are interrelated parameters and are essentially interdependent. The aim of the research was to identify the key socio-economic aspects of the quality of life in Latvia and the real estate, with a view to provide scientific and practical recommendations for improvement of the quality of life.

The researchers explored and systematically described how regular consumption of dietary fibre helped in maintaining health. It is an important tool in prevention of overweight, obesity, hypertension, gastrointestinal cancer etc. Nowadays average daily intake of fibre in many population groups is too low in relation to nutritional recommendations in Poland. One of the reasons of too small dietary fibre intake is the insufficient amount of wholemeal products in the diet. Too low intake of whole grains as a good source of fibre may appear due to the lack of nutritional knowledge. The objective of the study was to determine the relationships between nutritional knowledge and the frequency of eating of whole meal bread.

One efficient way to assess the adverse health effects of smoking on a society is to translate smoking-caused illnesses, premature mortality, and productivity losses into economic terms, a universal marker for measuring the adverse effects of smoking. The aim of the study was to calculate the burden of tobacco use to the health care system and to the society as well to analyze the quality of life of tobacco users among the working age population in Latvia.

The scientific significance of the study is that the understanding of the relationship between quality of life and tobacco smoking and the burden of the tobacco related diseases on the health care system is important not only for smokers to help them quit, but also helps to create evidence-based health care prevention programmes and policy systems that lower the emerging data and costs caused from tobacco use.

Development of professional education and career researchis becoming increasingly important in today's society.Topicality of the theoretical foundation of career management is determined by the lack of a theoretically substantiated career management model and its practical need for successful contemporary career guidance. The aim of the research was to substantiate a career management model viable in our contemporary society. To achieve the aim concepts of action, learning, competence, career, employability, human capital, mental models, career management and project management were briefly described and analysed. Contemporary definitions of the terms “career” and “career management” were proposed in the article. The results were presented in the career management model using constructivist approach developed by the author.

Career guidance has a long tradition in Lithuania that includes basic formal and non-formal education elements and levels and provides its fundamentals at secondary education institutions. In the Soviet period, and, to a certain extent, nowadays, career guidance is more associated with students' achievements rather than the demand of specialists in the labour market. Although the integration of graduates into the labour market is a "hot" subject for scientists, practitioners, experts in the field at various levels, however, so far there has been a tendency in Lithuania to educate traditionally popular (such as lawyers, economists), though excessively surplus in the labour market, specialists. This justifies the relevance of the topic and the aim of this article to investigate what actually determines – tradition or fear of change – that the career guidance system fails to respond flexibly to the needs of the Lithuanian labour market.

Level of unemployment is not increasing any more in Latvia. However, there are a lot of long-term unemployed social benefits receivers registered in Riga Social Service. They are not using their human capital to find job, they are additional burden to municipal budget and it causes social and psychological problems to unemployed themselves. The aim of research was to find out the way long-term unemployed social benefits receivers are looking on their human capital managing skill if they are training it or not and how it connects with their career development.

The influence of gender conformity principles on women's career development was investigated. There different stereotypes on the role, behaviour, appearance, mental abilities, etc. of one or another gender. These viewpoints are obsolete and sometimes do not fit the real situation. One of the domains where a considerable influence of stereotypes may be observed is the choice of an area of education based on the gender. It was concluded that even though gender equality theoretically existed in Latvia, there were still some stereotypes on men's and women's professions; the glass ceiling was not a widespread phenomenon, while in some kinds of jobs it might be observed, and the reality in Latvia was in line with the gender communication theory and communication differences might be observed for women in a team. The present research will contribute to the understanding of women's career barriers and encourage conducting in-depth research on gender equality in Latvia and the EU.

A dialogue is currently one of the main instruments used in career guidance practice in education and employment, including, also in the secondary vocational education. The entity of dialogue in students' career guidance can be integrated into theschool's educationalprocessandwherenot onlya careercounsellor, but alsoschoolteachersand other stakeholders are willing give their contribution. Suchprogressivedialogicalinteractionrevealsinterrelationships among all threecomponents ofcareer guidance - career information, career education and individual counselling.

With the fast development of information and communication technology (ICT)it is necessary to improve students' knowledge and skills of information technology (IT) needed for research and for the preparation of diploma works. Such knowledge and skills are traditionally acquired via informatics courses and individual consultations. Some authors introduced appropriate computer-based tests and independent works to test the students' IT competences. In close connection is the problem of insufficient level of student knowledge in elementary mathematics. Lecturers have prepared short video lectures which are available online for free and compensative courses in mathematics for the first year students. The research covers educational data analysis of this teaching experience with videos.

Higher mathematics entitles students to solve individual tasks; therefore students have an opportunity to use the teachers' advice for solving individual tasks twice a week. Results of the research showed theattitude of students towards the use of the possibilities offered as well as a correlation between attendance of the remedial course and the results of studies in mathematics.

The scientists of mathematics investigate the extent to which poverty and inequality indicators as well as household income and consumption expenditure correlate with mathematical literacy indicators in European countries. Using correlation analysis, the relationship between socio-economical indicators (Gini coefficient, people at risk of poverty or social exclusion, S80/S20 income quintile share ratio, unemployment rate, household median equivalised net income, household mean consumption expenditure per adult equivalent, household consumption expenditure for food and non-alcoholic beverages in percent from all consumption expenditure) and mathematical literacy indicators (mean score in mathematics, share of low achievers in mathematics, share of top achievers in mathematics) were analyzed. Using the cluster analysis the European countries classification was carried out. The results showed that the mathematical literacy and household poverty had a close relationship.

Articles about psychology cover discussionson the possible psychological causes of non-observance of work and civil safety regulations and the ways of decreasing the negative impact of these causes.

The study of job satisfaction was commenced at the first half of 20th century initially to improve work performance. The results of the research show that a satisfied worker displays better ability to work, is disposed positive, less suffers from any disease and less delays performance of job; all this has effect on the capacity to organize oneself and consequently, to be a success in making profit and displaying capability. The goal of this study was to find out the interrelation between job satisfaction, subjective

and psychological well-being of Medical personnel. The study results allowedmake the conclusion that there was a interrelation between job satisfaction and psychological well-being, which showed a particular correlation scale of the subjective and psychological well-being, but there was no interrelation between the subjective well-being and job satisfaction. The results showed medical personnel's dissatisfaction with pay and other remuneration, job evaluation, the system of motivation and internal communication.

The problem of perfectionism attracted the attention of the psychology science with a person's neurotic desire to strive for perfection. Many theoretical and empirical researches have proven the role of perfectionism, revealing numerous psychological and mental disorders of personality development. Typological approach with the aim to substitute traditional conception of perfectionism as a negative phenomenon for the approach that sets apart "normal" (adaptive) and "neurotic" (maladaptive) perfectionism, has been developed only within the last decades. The results of the research showed that adaptive perfectionism positively correlates with conscientiousness, extraversion and openness to experience and negatively correlates with neuroticism, agreeableness and honesty-humility. Maladaptive perfectionism positively correlates with neuroticism and conscientiousness and negatively correlates with agreeableness and honesty-humility.

The research on environmental factors influencingmoral behaviour of secondary school students was conducted in Nigeria. It was recommended that parents should provide children with guidance in the approved patterns of behaviour, and certain aspects of culture that did not portray positive values and morals should be discarded for the good of the students and the entire society among others.

The section **Foreign languages for professional and academic purposes** includes the research "Autonomous English acquisition in blended e-studies for adults for sustainable development: transformation of values". The topicality of the research arises from the complexity of holistic paradigm of sustainable development and cohesion of environmental and human sciences. A synergetic model for facilitation of the transformation of values from directed English acquisition in classroom environment to self-organised acquisition in the Internet supported learning environment was created, checked and could be used for facilitation of developing of self-experience of acquisition of other foreign languages as well.

Another study analyzes a 40 minutes long micro teaching focusing on English vocabulary related to cooking, which was delivered applying Task-based Language Learning method. The method views a task as a basic unit of language teaching and emphasizes the significance of real-life communication, thus enhancing communicative language competence. The aim of the study was to show how the task-based method works in practice, making the learners not only memorize new terms, but also use them in communicative situations.

The comparative analysis of the terms of land administration contained in the texts published in Latvia and the United Kingdom was conducted by a group of authors. It was based on corpus linguistics methodology, i.e., the parallel English term lists were created, the frequency of the term use was found and the concordances of the extracted English terms from both types of texts were analysed.

Teachers, lecturers, master and doctoral students have covered a wide range of themes providing diversity and topicality of the conference.

I would like to say many thanks to the authors, reviewers and organizers for their contribution in international scientific level.

On behalf of the Conference Organizing Committee
Associate professor Vija Dislere
Institute of Education and Home Economics
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Latvia University of Agriculture

Ecology of education: ecological approach in education

Social Environment in Class to promote 7-Year-Old Children's Adjustment at School

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Abstract: It is essential for an individual to have ability and skill to show respect for culture and values of society, thus expressing his or her social adjustment qualities to integrate into society and become its full-fledged member. The research concludes that a child cannot adapt himself to the school's learning process, if there is no child suitable social environment established and its organization of activities developed, i.e., there is no appropriate pedagogical assistance provided according to the child's needs, experience and possibilities. The aim of the article is to provide characterization of social environment in class based on pedagogical theory in order to promote child's social adjustment in the first grade of school. Thus children who are socially adjusted to social environment in 1st grade could be focused on their development by acquiring the necessary knowledge and skills in accordance with the actual learning process at school. The article reveals theoretical framework for the social environment in class, its resources, and the essence of the social adjustment of 7-year-old children in 1st grade of school. Definitions of the social environment and social adjustment have been analysed, criteria and levels of social adjustment posed, social adjustment of 7-year-old children in 1st grade of school described, and social environment possibilities in class described. Data analysis gained in the study shows that provision of social environment in class appropriate to a 7-year-old child contributes to children's social adjustment which is a precondition for children's further integration into society and a precondition for development of a responsible society.

Keywords: adjustment, interaction, 7-year-old child, social environment, school education.

Introduction

Primary goal for education has always been the child's as personality's development and successful adaptation to society which is characterized by a single value system, cultural heritage for future generations and the ability to rely on children's own strength (Izglītības likums, 1998).

The learning process as well is focused on an individual's ability to independently acquire knowledge and its use, thus achieving a comprehensive use of knowledge in any field of human activity (Latvian National..., 2006). To implement that, it is important for every child to be part of a particular society, to acquire its cultural values, norms and requirements, thus integrating.

Integration into society occurs in communication and activity according to conceptual nature. It has been implemented by an individual's activity that requires a certain motivation and performance, and that requires preconditions that are effective in social environment and correspond to individual's needs, thus enabling personal development and fitting in society.

Ecology theory on human development indicates that the most important part of an environment is microsystem – at first it is family, but at school age it also includes school and a peer group that is important to a child. Microsystem is part of environment which a 7-year-old child has immediate interaction with, thus promoting his or her development (Bronfenbrenner, 1981). Consequently social environment in class can be considered as microsystem of a society. One should bear in mind that it is education mainly that forms the microsystem thus being described as an interactive social process which is composed of definite interrelations among different subjects of learning process (Klafki, 1999)

In the 1st grade the main focus has been put on diagnosing children's knowledge, abilities and skills, and organization of a traditional form of children activities at school – a lesson. Therefore, regularities in children's development determine that a systematic and continuous transition from pre-school educational process, where a play is the main activity, to a gradual curricular activity at school is difficult. As a result a child begins losing interest in going to school already in the second or the third week of school, as well as his dislike for learning process appears, i.e., a gradual reorientation from

playing activities to lessons is not considered. Although there are weeks of adaptation activities arranged in the first grade, however, survey data show that children comprehend them as formal and insufficient activities thus limiting their self-expression in a new situation and not revealing the child's gradual reorientation from playing activities to lessons or to an intermediate approach (Bergholce, Hmieļevska, 2007; Āboltiņa, Bērziņa, 2008, Andersone, Āboltiņa, 2011, Obligātās pirmsskolas…, 2008). These studies show that in order to meet their developmental regularities, preschool experience and social abilities, 7-year-old children are in need of purposefully organized teaching process that would facilitate their social adjustment to school and create personally meaningful socialization in class that is their new social environment.

Based on personality social development components the ability to communicate and cooperate has been brought forward as the primary requirement of social environment in class, that is, the ability to act collectively, the ability to contact with peers and adults, the ability to respect the opinions of others and to offer their own, the ability to participate in training activities that all together develop child's social image to which the child's social adjustment and prospects of further development in society depend on. By contrast the child's experience defines the approval of requirements posed. The 7-year-old child's social adjustment to the 1st grade of school depends on organization of environment in class, children's emotions, and their emotional experiences.

Methodology

Research base: 98 first-graders, 98 parents of the first-graders, 3 first grade teachers. The research includes two groups – Group A (the first grade of 33 pupils, in which the pilot program of social adaptation has been approbated) and Group B (2 first grades of 65 pupils totally, in which the pilot program of social adaptation has not been approbated).

In order to explore 7-year-old children's adjustment to social environment in 1st grade, analysis of theoretical and scientific literature (literature of pedagogy and psychology) has been carried out for the study, thus clarifying the nature of the concept of social environment and adjustment. There were empirical data acquisition methods used: parent survey and pedagogical observations by using *SPSS 15.0* and *Excell* data processing programs to explore the functioning of 7-year-old children's adjustment to social environment in class.

In this study the social environment is perceived as relations area within an interactive learning process, different levels of interaction between students, teachers and the class as a whole (Figure 1).

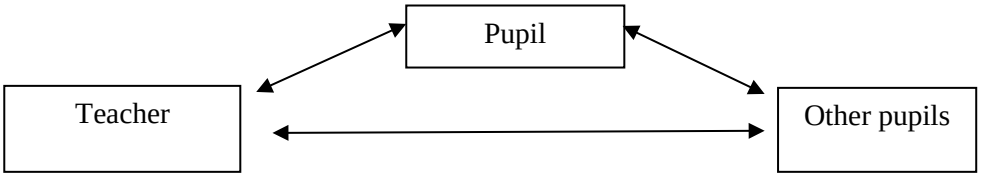

Figure 1. Social environmental components (Authors' design).

Perception of social environment of education is based on the knowledge of a human as a social being who needs to feel belonging to a certain part of society, in this case to the class as a social group which consists of a definite number of pupils (peers) (Šūmane, 2012).

A definition of *social adjustment* has been developed on the basis of the analysis of theoretical literature and sources on social adjustment nature, describing social adaptation to the 1st grade.

Social adjustment is a 7-year-old child's feature of development in social environment, the effectiveness of which is determined by interaction between a 7-year-old child's individuality and the social environment or balance system which ensures the child's possibilities for self-implementation in a new social environment of 1st grade by respecting the choice of methods and forms appropriate to the formulation of social environment. Within the social adaptation process a child gets to know and gradually acquires social norms and roles, values, objectives, standards of behaviour, and mutual ways of interacting in an organization (school). The child also expresses himself in an action and emotions appropriate to any situation, evaluates their own behaviour and actions that in a result of a

successful development occur in child's personal integrity development of social adjustment (Āboltiņa, 2014).

Social adjustment is described in relation to external and internal factors (Figure 2). It does not happen without promotion of a child's purposeful action, the child's conscious activity intensifies the adjustment through its own characteristics and environmental possibilities (Налчаджян, 1988).

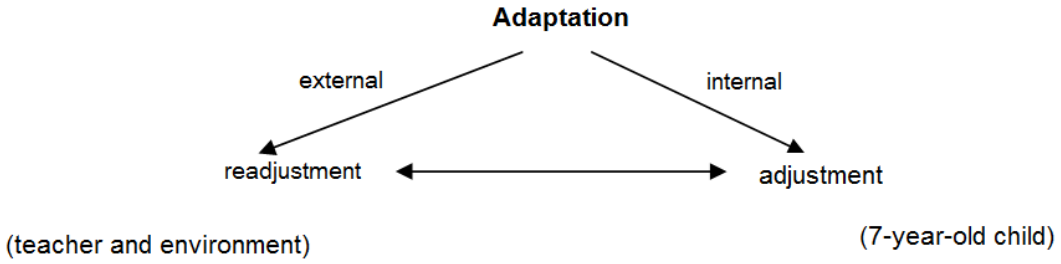

Figure 2. Scheme of social adjustment in relation to external and internal factors (Authors' design).

Externally it has been defined by social environment in class (the conditions, situations, requirements, rules) which is projected, designed and led (promoted) by a teacher by respecting the regularities in the 7-year-old child's development and personal features. Teacher competence, communication with 7-year-old children, professional beliefs and attitudes towards their pupils and themselves determines the nature of interaction with 7-year-old children, thus purposefully creating an educational situation for a 7-year-old child's diverse and harmonious development which the child's activity depends on (Žogla, 2001).

Internally it has been characterized by 7-year-old child's developmental regularities and personal development possibilities being influenced by terms of heredity, environment and education, also including different possibilities for child's activity. Thus the essence of social adaptation results from interaction between readjustment and adjustment components based on unity of internal and external factors within the socialization process.

Social environment, as interpersonal relationships, is the relationship among certain individuals with a purpose to understand and learn about the other persons' desires, needs, and beliefs. The main characteristics of social environment are the following: mutual relations, attitudes, interface, communication and social roles. Desired qualities of previously mentioned characteristics are mutual trust, cooperation, mutual respect, sense of belonging, sense of safety and self-discipline is the (Garleja, 2006).

Social environment includes (Ясвин, 2001):

- the lead of surrounding people, their culture, experience, behaviour, mutual relations (cooperation, mutual assistance);
- institutions and groups which a human is facing in reality;
- individual's place in the collective (e.g., leaders, pariah).

If a pupil has interaction problems such as conflicts with friends, parents and classmates, he/she is exposed to stress and nervousness, and their personal relationship problems prevail over everything else, and learning process becomes impossible. Feeling good at school is essential for a pupil to be successful in learning process. It is a comprehensive research group in pedagogy (Barratt, 2011; Dreesmann, 1982; Eder,1996; Hascher,2004; Fend, 1990; Fraser,2007; Saldern, 1983*)* on pupils' self-awareness at school in relation to the situation of social environment in class.

It can be concluded that a 7-year-old child needs to adjust socially to feel good at school which can happen by interaction with social environment of 1st grade and can be characterized by such components as external performance, integration level of *micro* and *meso* environments, realisation rate of inner potential, emotional self-awareness and control. The following groups of criteria depend on the above mentioned characteristics (Lopes, Mestre, 2012; Жмыриков, 1989; Реан, 2011; Реан, Кудашев, 2006):

- communication and cooperation;
- deliberate social role – a pupil;
- emotions in the learning process, emotional experience;
- self-esteem.

Criteria for social adjustment were posed and adjustment levels defined according to the groups of criteria:

- ***maladjustment level*** (the 1st level) indicates that a child has insufficient experience and social readiness to move to the next level of adjustment. It can be estimated as *insufficient* feature;
- ***pre-adjustment level*** (the 2nd level) characterizes fitting and accommodation of 7-year-old children, because they have not mastered the adjustment techniques. There are some attempts; however, social adjustment to social environment in class occurs rather arbitrary and spontaneous which can be estimated as *nearly sufficient* feature;
- ***unstructured adjustment level*** (the 3rd level) determines that child has mastered some adjustment techniques and is trying to use them, but he/she has some difficulties to interconnect them which can be estimated as *sufficient* feature;
- ***structured adjustment level*** (the 4th level) indicates that child has mastered appropriate adjustment techniques that can be estimated as *optimal* feature;
- ***self-regulating adjustment level*** (the 5th level) indicates that child acts by coordinating social environmental conditions in class with his/her internal activity terms, thus revealing the child's flexibility, initiative, self-expression and other personality components that can be estimated as *high* feature.

Results and discussion

To facilitate the 7-year-old children's adjustment to social environment in class, a structure of social adaptation pilot program was developed and approved in accordance with 7-year-old children's developmental regularities. Content of the program has been integrated with the 1st grade learning content according to the National Standard of Basic Education in Latvia (Noteikumi par valsts..., 2013) and with the requirements for the 1st grade educational content and lesson program model (Klases stundu..., 2006). The content of the program includes the following descriptors for social environment in class: pupil – pupil, interaction with pupil and teacher, cooperation, and awareness and self-esteem of a pupil as social role.

7-year-old children's social adjustment assessment was implemented by ascertaining experiment which consisted of two phases – study on initial situation on 7-year-old children's social adjustment and re-exploration of 7-year-old children's social adjustment according to components and levels of social adjustment posed.

To compare the research data, arithmetic mean of 7-year-old children's social adjustment was calculated during initial and repeated study (Table 1 and Table 2).

Table 1

Average mean of initial and repeated study on 7-year-old children's social adjustment according to parent survey

Group type	Mean ***initial data***		Mean ***repeated***		Mean ***disparity***
Group B	65	**3,9**	65	**3,9**	-
Group A	33	**3,8**	33	**4,2**	0,4

Initial data of parent survey and children's observation have been compared with the re-measurement data. Average indicators of initial data in Group A are lower than in Group B, because the initial data averages of parent survey in Group B are 3.9, in Group A it is 3.8 compared to the re-measurement averages in Group B – 3.9, in Group A – 4.2 (Table 1). The repeated measurement shows that its

average indicators in Group B are the same as averages of the initial data, but in Group A the averages have increased by 0.4. Average indicators of initial data on child observation in Group B are 2.9, in Group A – 3.5, but re-measured averages in Group B – 3,2, in Group A – 4.0 (Table 2). This indicates that the difference of initial data and re-measuring data averages in Group B is 0.3, in Group A –0.5.

Table 2

Average mean of initial and repeated study on 7-year-old children's social adjustment indicators according to observations

Group type	**Mean** ***Initial data***		**Mean** ***repeated***		**Mena** ***disparity***
Group B	65	**2,9**	65	**3,2**	0,3
Group A	33	**3,5**	33	**4,0**	0,5

In order to evaluate social environment in class to facilitate 7-year-old children's social adjustment, data of parent surveys and teacher observations were compared (Addition: Table 1 and Table 2).

By assessment of average survey and observation indicators, the following significant trends appear:

- In general the total averages of the parent survey are 4.0 in group A and 4.2 in group B, which has been estimated as *optimal* and *structured* social adjustment level. In turn, total average indicators assessed by teachers on 7-year-old children initial observation are 3.0 and 3.5 in groups A and B, which corresponds to adjustment feature – *sufficient*. Total average indicators of the repeated observation in Group A is 4.0, which corresponds to the *optimal* and *structured* social adjustment level, and in group B – 3.3, that corresponds to *sufficient* and *unstructured* social adjustment level. It shows that during the observation of 7-year-old children teachers act by considering and assessing behaviour in accordance with the features of social adjustment level, thus appointing social adjustment differences in groups A and B.
- The initial observation on criteria *nonverbal communication* and *positive learning experience of learning activities* shows that Group A has lower indicators than Group B. The repeated observation and survey shows that Group A has lower indicators than Group B only for the criterion of *participation in activities organized by class (school).* This suggests that social adjustment of 7-year-old children in Group A compared with Group B happens in a more dynamic way.
- According to all criteria of social adjustment the average difference of parent survey in groups A and B is relatively lower (range 0 to 0.4) than the initial (range 0 to 0.9) and repeated observation shows (range 0.2 to 1.1). This is indicative of superficial attitude of parents and perhaps low skills to objectively evaluate the 7-year-old children's social adjustment in accordance with the required criteria.
- Total average indicator of the initial observation compared to re-observation in groups A and B (Table 6) draws to a conclusion that in Group A it has increased by 0.5 (3.5 → 4.0) and in Group B by 0.3 (3.0 → 3.3). Also the total average indicator of parent survey is 4.2 in Group A which is higher compared to total average indicator of Group B – 4.0 (Table 5) and refers to relatively stronger 7-year-old children's social adjustment dynamics in Group A than in Group B.

Conclusions

- Primary data analysis of 7-year-old children's social adjustment process indicates that children's social adjustment in both research groups (A and B) corresponds to the feature *sufficient*, characterized by *unstructured* adjustment level.
- Results of the research shows that social adjustment pilot program contributes to 7-year-old children's social adjustment, however, there are cases where children have some difficulties to adapt socially and social environment in class requires an individual approach and support in promoting children's social adjustment.

- Social adjustment can be cognized, as well as child's social adjustment can be promoted during pedagogical process by use of social adjustment components and appropriate criteria and levels developed during the research.
- 7-year-old children's social adjustment is working smoothly only if consistent social adjustment program is used by including descriptors of social environment in class.
- Survey and observation data collected and analysed on the empirical research approves 7-year-old children's social adjustment dynamics and possibilities of social environment in class in promoting 7-year-old children's social adjustment.

Bibliography

1. Andersone R., Āboltiņa L. (2011). *Sešgadīgo izglītojamo mācību programmas ieviešanas aprobācija* (Approbation of Curriculum Implementation for Six-Year Old Pupils). Rīga, VISC, Latvia. (In Latvian)
2. Āboltiņa L. (2014). 7-gadīgo bērnu sociālā adaptēšanās 1.klasē (7-Year-Old Children's Social Adjustment in the 1st Grade of School). Promocijas darbs (Doctoral Thesis). Rīga, LU, Latvia. (In Latvian)
3. Āboltiņa L., Bērziņa Ž. (2008). Pirmsskolas kā stiprs pamats sabiedrības attīstībai (Preschool as a Strong Foundation for Development of Society). Rīga, Valsts Prezidenta kanceleja Stratēģijas analīzes komisija, (Strategic Analysis Commission of the Chancery of the President), Latvia. (In Latvian)
4. Barratt W. (2011). Social Class on Campus: Theories and Manifestations. Bures. Sterling, CA: Stylus Publishing, USA, 239 pp. Available at [11.03.2015]. http://www.nacada.ksu.edu/Resources/Journal/Current-Past-Book-Reviews/articleType/ArticleView/articleId/376/Social-class-on-campus-Theories-and-manifestations.aspx
5. Bergholce D., Hmieļevska I. (2007). Vispārizglītojošo skolu 1.klašu skolēnu gatavība pamatizglītības satura apguvei (First Grade Pupils' Readiness for Acquirement of Basic Education in Comprehensive Schools). IZM ISEC, Riga, Latvia. [online] Available at [11.03.2015]. http://visc.gov.lv/visc/dokumenti/petijumi/1klasu_skolenu_gataviba.pdf (In Latvian)
6. Bronfenbrenner U. (1981). Die Ökologie der mensclischen Entwicklung. (The Ecology of Human Development). Stuttgart: Klett-Cotta. (in German)
7. Dreesmann H. (1982). *Unterrichtsklima* (The Classroom Climate/Environment). Weinheim/ Basel: Belz. (in German)
8. Eder F. (1996). *Schul- und Klassenklima*. Ausprägung, Determinanten und Wirkungen des Klimas an weiterführenden Schulen (Social Climate at School and Classroom). Innsbruck: StudienVerlag. (in German)
9. Fend H. (1990). *S*oziale Erfolge" im Bildungswesen - die Bedeutung der sozialen Stellung in der Schulklasse (Social Success in Education – the Importance of Social Status in Classroom). Stuttgart. [online] Available at [11.03.2015]. http://www.fachportal-paedagogik.de/fis_bildung/suche/fis_set.html?FId=113329 (in German)
10. Fraser B.J. (2007). Clasroom education emvironments. In: *Handbook of research on science education*. New Jersey, pp. 103 – 124.
11. Garleja R. (2006). *Cilvēkpotenciāls sociālajā vidē* (Human Potential in Social Environment.). Rīga: RaKa. (In Latvian)
12. Hascher T. (2004). *Schuhle positiv erleben* (Positive School Experience). Haupt Bern [u.a]. (In German)
13. *Izglītības likums* (Education Law). (1998). Rīga: RaKa, 15 lpp. (In Latvian)
14. Klafki W. (1999). Die Bildungsteoretische Didaktik im Rahmen kritisch – konstruktiver Erziehungswissenschaft (Didactics of Educational Theory in Critically Constructive Education). In: Gudjons, W. (Hg.) *Didaktische Teorien* (Theory of Didactics). Hamburg: Bergmann+Helbig, S.13-34. (In German)

15. *Klases stundu programmas paraugs* (2006). (Class Program Example). Metodiskais līdzeklis (Methodological tool), Riga. [online] [14.01.2015]. Available at http://visc.gov.lv/audzinasana/metmat/audz_vjic_rik69.pdf (In Latvian)
16. Latvian National Development Plan 2007-2013. (2006). Ministry of Regional Development and Local Government of the Republic of Latvia, Riga. [online] [14.01.2015]. Available at http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=13524 (In Latvian)
17. Lopes P., Mestre J. (2012). The Role of Knowledge and Skills for Managing Emotions in Adaptation to School: Aocial Behavior and Misconduct in the Classroom. *American Educational search Journal,* N^{0} 4, pp.710.-742.
18. *Noteikumi par valsts pamatizglītības standartu, pamatizglītības mācību priekšmetu standartiem un pamatizglītības programmu paraugiem* (2013). (Regulations on the National Standard of Basic Education, on Standards of Basic Education Subjects and on Models of Basic Education Curriculum). Ministru kabineta noteikumi Nr.530. (Cabinet of Ministers Regulation 530). Riga. [online] [14.01.2015]. Available at http://likumi.lv/doc.php?id=259125 (In Latvian)
19. *Obligātās pirmsskolas un sākumskolas izglītības izvērtējums un pilnveides iespējas* (2008). (Developmental Possibilities and Evaluation of Pre-School and Primary School Mandatory Education). Ed. Krastiņa E. Datu analīze (Analysis of the data). Daugavpils Universitāte: Ilgtspējīgas izglītības institūts. (Daugavpils University: Institute of Sustainable Education). [online] [14.01.2015]. Available at http://izm.izm.gov.lv/upload_file/Petijums_Daugavpils_Universitate.pdf (In Latvian)
20. Saldern M. (1983). Das Sozialklima als gruppenspezifische Wahrnehmung der schulischen Lernumwelt (Social Climate as a Group-Specific Perception of Educational Environment at School). In: *Unterrichtswissenschaft* (Education Sciences), 11, 1983, 116-128. (In German)
21. Šūmane I. (2012). *Pusaudžu mācību sasniegumus veicinoša mācību vide* (Learning environment facilitating educational achievements of teenagers). Promocijas darbs. (Doctoral Thesis). LU, Latvia. (In Latvian)
22. Žogla I. (2001). *Didaktikas teorētiskie pamati* (Theoretical Foundation of Didactics.). Rīga, RaKa, Latvia. (In Latvian)
23. Жмыриков А. И. (1989). *Диагностика социально-психологической адаптированности личности в новых условиях деятельности и общения* (Diagnostics of Socially Psychological Adjustment of Personality to New Conditions of Activity and Communication). Автореферат - кандидатская диссертация по психологии. Москва. (In Russian)
24. Налчаджян А. А. (1988). Социально - психическая адаптация личности (Socially Psychological Adaptation of Personality). Ереван: Издательство АН Армянской ССР. (In Russian)
25. Реан А. А. (2011). *Общая психология и психология личности* (General Psychology and Personality Psychology). Москва, СПб, прайм-ЕВРОЗНАК, Russia. (In Russian)
26. Реан А. А., Кудашев, А. Р.(2006). *Психология адаптации личности. Анализ, теория, практика* (Psychological Adaptation of Personality. Analysis, Theory and Practice). Москва, СПб: прайм-ЕВРОЗНАК, Russia. (In Russian)
27. Ясвин В. (2001). *Образоватльная среда*: от моделирования к проектированию (Educational Environment: from Modelling to Design). Москва, Смысл, Russia. (In Russian)

Addition
Table 1

Average rates of 7-year-old children's social adjustment study in Groups A and B

SOCIAL ADJUSTMENT COMPONENTS	Mean of the adjustment survey		Indicator disparity	Criterion of social adjustment	Mean of observation on adjustment		Indicator disparity
	Group B	Group A			Group B	Group A	
COMMUNICATION AND COOPERATION	4,2	4,4	**0,2**	Verbal communication with peers	3,5	3,7	**0,2**
	3,9	4,1	0,2	Verbal communication with adults	3,3	3,9	0,6
	3,7	3,8	0,1	Nonverbal communication	2,7	3,8	1,1
	3,9	4,2	0,3	Cooperation with peers during the educational process	3,1	4,1	1,0
	4,0	4,3	0,3	Cooperation with a teacher during the educational process	3,2	4,3	1,1
PUPIL AS A SOCIAL ROLE	4,2	4,3	0,1	Behaviour proper to their new social role – a pupil	3,5	4,1	0,6
	3,8	4,2	0,4	Selection, use, and arrangement of a pupil's school accessories	3,6	4,1	0,5
	4,3	4,2	**0,1**	Participation in activities organized by class (school)	3,4	3,8	0,4
	4,2	4,5	0,3	Performance of pupil's daily duties	3,2	3,9	0,7
	4,2	4,3	0,1	Helpfulness and friendliness performing as a "pupil"	3,2	4,1	0,9
EMOTIONS WITHIN THE LEARNING PROCESS, EMOTIONAL EXPERIENCE	4,0	4,4	0,4	Emotion recognition (naming) and interpretation	3,2	4,2	1,0
	4,0	4,4	0,4	Emotional reaction and self-control	3,2	3,9	0,7
	4,1	4,3	0,2	Recognition of peer and adult emotions	3,2	3,9	0,7
	4,0	4,1	0,1	Positive emotional experience during the educational process	3,6	3,9	0,3
	3,9	3,9		Tolerance (indulgence) towards those that differ (peers)	3,4	3,8	0,4
SELF-ESTEEM	4,0	4,4	0,4	Evaluation of their own success	3,4	4,2	0,8
	3,9	4,0	0,1	Evaluation of their own failures	3,3	4,1	0,8
	3,7	3,8	0,1	Evaluation of their own learning process	2,9	4,0	1,1
	3,7	4,1	0,4	Evaluation of their own behaviour (at school)	3,1	3,9	0,8
	3,9	4,2	0,3	Evaluation of self-awareness (at school)	3,1	4,2	1,1
	4,0	**4,2**	**0,2**	**Total mean**	**3,3**	**4,0**	**0,7**

Table 2

Average rates of initial and repeated observations on 7-year-old children's social adjustment in Groups A and B

SOCIAL ADJUSTMENT COMPONENTS	Average mean of initial adjustment observation		Indicator disparity	Criterion of social adjustment	Average mean of repeated adjustment observation		Indicator disparity
	Group B	Group A			Group B	Group A	
COMMUNICATION AND COOPERATION	3,1	**2,7**	0,4	Verbal communication with peers	3,5	3,7	0,2
	2,9	2,8	0,1	Verbal communication with adults	3,3	3,9	0,6
	2,6	3,7	1,1	Nonverbal communication	2,7	3,8	1,1
	2,9	3,8	0,9	Cooperation with peers during the educational process	3,1	4,1	1,0
	2,9	3,8	0,9	Cooperation with a teacher during the educational process	3,2	4,3	1,1
PUPIL AS SOCIAL ROLE	3,4	3,6	0,2	Behaviour proper to their new social role – a pupil	3,5	4,1	0,6
	3,4	3,9	0,5	Selection, use, and arrangement of a pupil's school accessories	3,6	4,1	0,5
	3,2	3,2		Participation in activities organized by class (school)	3,4	3,8	0,4
	3,1	3,7	0,6	Performance of pupil's daily duties	3,2	3,9	0,7
	3,0	3,8	0,8	Helpfulness and friendliness performing as a "pupil"	3,2	4,1	0,9
EMOTIONS WITHIN THE LEARNING PROCESS, EMOTIONAL EXPERIENCE	3,1	3,8	0,7	Emotion recognition (naming) and interpretation	3,2	4,2	1,0
	3,0	3,1	0,1	Emotional reaction and self-control	3,2	3,9	0,7
	2,9	3,8	0,9	Recognition of peer and adult emotions	3,2	3,9	0,7
	3,4	**3,2**	**0,2**	Positive emotional experience during the educational process	3,6	3,9	0,3
	3,1	3,2	0,1	Tolerance (indulgence) towards those that differ (peers)	3,4	3,8	0,4
SELF-ESTEEM	3,1	4,0	0,9	Evaluation of their own success	3,4	4,2	0,8
	2,9	3,2	0,3	Evaluation of their own failures	3,3	4,1	0,8
	2,5	3,2	0,7	Evaluation of their own learning process	2,9	4,0	1,1
	2,8	3,2	0,4	Evaluation of their own behaviour (at school)	3,1	3,9	0,8
	2,8	4,0	1,2	Evaluation of self-awareness (at school)	3,1	4,2	1,1
	3,0	**3,5**	**0,5**	**Average mean**	**3,3**	**4,0**	**0,7**

Community Education and Integrated Organization of Rural Areas based on Land Consolidation Processes in Poland

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Abstract: Any activities aimed at rural area development should not disregard the inhabitants who are "the tools" that implement given mechanisms. To a large extent, the effectiveness of social activities is determined by the participants' expectations towards the projects and their knowledge of the subject. Land consolidation projects are the ideal tools for rural development. Land consolidation may be described as the planned readjustment of land ownership patterns with the aim of creating larger and more rational land holdings. Other goals of land consolidation may include infrastructural improvements and the implementation of developmental and environmental policies. Members of the local community participating in the project should have sufficient knowledge about both positive and negative outcomes of their actions. Surveyors, designers, the relevant literature and guidebooks communicate only the positive results to farmers and other project participants to enhance their interest in land consolidation. This article discusses both positive and negative aspects of rural land consolidation and the opportunities and threats associated with consolidation measures. The environmental, social and economic prerequisites for consolidation are presented. Land consolidation measures will be evaluated in a SWOT analysis. Our findings should be presented to members of the local community to increase assist them in the decision-making process. Qualitative methods, in particular analytical, topological and identification methods were used to accomplish the above research tasks.

Keywords: land consolidation, rural development, environmental protection, local community.

Introduction

Land consolidation, which is also known as land readjustment, reallotment or reparcellation, is a spatial planning process and a highly complex spatial allocation problem. Land consolidation is defined as "introduction of optimal changes to land structure in a rural area based on the provisions of national laws regulating land consolidation (which, together with current practice, impose a series of criteria and limitations) to achieve the goals of a given consolidation scheme".

In many countries, including the EU Member States, land was consolidated to intensify farming operations. The above led to serious environmental problems, including soil, water and air pollution, and the loss of many wildlife species.
Land consolidation processes introduced for the sole purpose of improving agricultural production and working conditions can have negative consequences for the natural environment (Thomas, 2006).

Today, land consolidation is also regarded as an effective tool that contributes to rural development. The concept of rural development involves improvements in agricultural production, rural employment, tax policies, infrastructure, public utilities, residential construction and nature conservation (Weiss, Maliene, 2004). For this reason, land consolidation should be regarded as the main tool in sustainable development of rural areas.

The main objective of this study was to present the procedure of agricultural land consolidation as a whole. Procedures are not only beneficial for the space and society but also characterized by certain risks and opportunities. Our findings should be presented to members of the local community to increase assist them in the decision-making process.

The first part of the article deals with positive and negative consequences of land consolidation on the natural environment in rural areas. Social problems associated with land consolidation are discussed in the second chapter. The third chapter focuses on the economic consequences of consolidation. The final chapter contains a SWOT analysis of land consolidation projects.

The presentation of land consolidation requirements was preceded by the following research tasks:

- identification of the environmental effects of land consolidation;
- characterization of the local community and identification of social consequences of land consolidation;
- identification of the economic effects of land consolidation;
- SWOT analysis of land consolidation projects in rural areas in Poland.

Methodology

Qualitative methods, in particular analyses and logical constructions, including identification were used in the study (Dawidowicz, Źróbek, 2012). Those methods were applied to consolidate the analyzed problem and propose optimal solutions. Other research methods included comparative analysis as well as analyses of the relevant literature, documents and legal regulations (Dudzińska, Kocur-Bera 2014a; Dudzińska, Kocur-Bera, 2014b).

Results and discussion

1. Identification of the environmental effects of land consolidation

The degradation of agricultural land resulting from anthropogenic and natural factors leads to a qualitative deterioration of various elements of the agroecosystem, including soil, hydrographic conditions, air, landscape and landscape diversity (Korelewski, 2009). Environmental degradation resulting from agricultural activities affects (Domagała-Świątkiewicz, 2005):

- soil quality (risk of wind and water erosion, deterioration of the physical properties of soil due to mechanization, lower content of humic substances, risk of acidification and salinity, risk of pesticide and heavy metal contamination);
- air quality (greenhouse gas emissions to ambient air);
- water quality (nitrogen contamination, phosphorus contamination);
- preservation of rural landscape diversity.

Soil degradation caused by water and wind erosion

Water and wind erosion are natural processes that are often triggered by ineffective land management and land cultivation practices (Koreleski, 1987**).** Many natural factors and agricultural practices determine the duration, intensity, form and extent of erosive soil degradation. In areas characterized by considerable land fragmentation, those factors include a large number of fields whose orientation relative to sloping terrain obstructs agricultural practices, reluctance to apply contour plowing techniques and unsupportive land use structure (Wawer, Nowocień, 2006). Water erosion includes degradation caused by rising water levels due to heavy rainfall, flooding and snow melting (Siuta, Żukowski, 2010).

Degradation of land improvement systems

Polish land improvement systems are largely outdated and degraded in areas characterized by significant land fragmentation. The above contributes to further damage and degradation of the soil environment. Land improvement systems are introduced not only to protect farmland and soil against erosion and devastation, but they are also the least costly method of counteracting the negative consequences of drought, terracing and flooding. The main aims of soil stabilization and erosion control measures are to:

- limit erosion,
- protect the productive capacity of soil and prevent adverse changes in soil conditions,
- prevent structural deformation of land, in particular the formation of gullies and valleys that intersect farm fields,
- prevent adverse changes in hydrographic conditions and the extension of the hydrological cycle in the local landscape.

Land sliding

Land sliding takes places in areas that are susceptible to this form of land degradation due to their specific geological structure, landform and hydrogeological conditions. This adverse process can be triggered and exacerbated by agricultural practices that affect the stability of the slope. It is most often observed in mountains, foothills, along coastlines and sea shores, including on the Baltic Sea, and stream bed sections. They are sporadically noted at the base of very large heaps of mineral waste and earth excavated from strip mines. The technological progress made in landfilling methods and biological reclamation of dumping grounds minimizes the risk of soil erosion and land sliding.

According to M. Dudzińska and K. Kocur-Bera (2014b), the remaining positive environmental outcomes of land consolidation include: securing land for residential construction, minimizing the number of land plots with irregular shape, adapting plot boundaries to land improvement systems and land relief (preventing water erosion), making optimal use of the land-use structure and soil class for the needs of the chosen production system.

2. Negative environmental impacts associated with land fragmentation

Engineering practices associated with land consolidation have a two-fold impact on biodiversity. Firstly, construction materials can severely disturb or directly damage wildlife habitats. Excessive use of concrete, cement and asphalt not only destroys native biological communities, but it also greatly affects survival capabilities of soil microorganisms. Secondly, engineering practices destroy game trails and migration paths. Artificial construction materials degrade the local landscape, while engineering designs ignore wildlife movement.

Land consolidation projects modify the original landscape patterns through land levelling and changing the direction of roads and ditches. Engineering practices can considerably alter the original topography in very short periods of time (Zhang, Luo, 2012).

Land consolidation also leads to the intensification of agricultural operations, which is associated with a reduction in the area of mosaic habitats, allocation of more land for farming purposes and conversion of grasslands to arable land. Those processes contribute to a reduction in the area of natural and semi-natural habitats, the elimination of mid-field trees, ponds and strip boundaries, loss of species inhabiting crop fields (both plants, including weeds, and animals), isolation of wildlife enclaves and intensified erosion (Dobrzyńska, 2003).

A study of two sites in the Western Carpathians (Koreleski, 1987) revealed that the decrease in the area of strip boundaries resulting from land consolidation projects completed in 1976-1983 ranged from zero (Mogilny) to 0.0209 ha per 1 ha of consolidated land (Jabłonka).

The increase in cattle populations leads to intensified production of fodder plants in grasslands. Excessive stocking rates contribute to eutrophication due to larger quantities of manure, higher soil erosion, expansion of plant species not consumed by animals and a decrease in the species richness of pastures. Higher stocking rates in pastures generate considerable losses in bird breeding grounds and force many bird species to desert their habitats (Dobrzyńska, 2003).

3. Characterization of the local community and identification of social consequences of land consolidation

Active public participation is indispensable for the success of any land consolidation program. Past experiences have revealed that mustering public participation in such programs is very difficult as it entails some compromise in terms of gain or loss of land. Any externally induced land consolidation program is unlikely to produce a desirable result. Forced consolidation never succeeded in Europe (Riddell, Rembold, 2000).

The following social components have been identified by M.Stanny and A. Czarnecki (2011) in the process of sustainable development at the municipal level (in Poland, land consolidation measures are initiated at the level of municipalities or cadastral districts): demographics, education, social engagement, local governance and living conditions. Population characteristics (age, gender, level of

education) and location of economic activities can inhibit or stimulate diversification of income and structural transformations in Polish agriculture (Sikorska, 2011).

Project participants

It should be noted, however, that land consolidation schemes are performed with the involvement of farmers whose holdings have a diverse structure. In Poland, 46% of all private farms (1,057,000) have the area of up to 2 hectares (and are defined as small farms). The interests of small and large farm owners do not coincide. Large-scale farmers aim to improve the structure of their land holdings. Large farms are characterized by high productivity in terms of the cost-to-income ratio, which is the basic prerequisite for success on an increasingly globalized market of food and agricultural products. This farming model also generates negative outcomes, such as environmental degradation and population decline in peripheral rural areas whose inhabitants rely main on agricultural production as a source of income (Czudec, 2013).

Due to considerable differenees in size, the problems associated with the spatial parameters of small farms are generally less acute and the benefits of land consolidation are less apparent in small farms than in large agricultural holdings.

Land consolidation also promotes higher levels of social activity in rural areas. Social involvement in land consolidation projects that increase employment, improve infrastructure and social services leads to social stabilization. In West Europe, tax revenues increased in areas where land consolidation created job opportunities (Dacko, 2006).

By participating in land consolidation projects, members of the local community acquire new experiences, learn to cooperate and become more active. Local communities can become more self-reliant when provided with expert support (Kampka, 2009).

Education

The existing viewpoints in society and to a certain extent myths linked with them, for instance, that rural schoolchildren‘s education quality is lower than urban schoolchildren‘s education; moreover, teaching- learning process and their skills in rural schools are much lower; material basis is insufficient; it is easier for a teacher to work or on the contrary, it is harder to do the job responsibilities without books, workbooks and home tasks if they constitute the part of learning tools, it is next to impossible etc. (Anspoka, 2012)

Currently rural school education environment has become both the developmental environment of the personality as well as the developmental environment of rural society. Rural schools take the responsibility of its further development as well as the developmental sustainability of the whole local rural society. On the one hand, rural school education environment influences the on-going processes in the outer vicinity. On the other hand, the outer environment also impacts the school culture environment as well as each pupil‘s developmental personality (Katane, 2005).

There exist different educational needs of the society of local scale in different rural regions that, in their turn, depend on different factors: economical situation and population’s employment, demographical situation, the number of rural inhabitants, structure and age peculiarities, already obtained education, values orientation, attitude, desire of self-realization, as well as aims and possibilities of professional development, etc. (Laizāne, Katane, 2012)

In Poland, the farmer is a person:
- agricultural education of at least vocational education level or secondary or higher education, or
- individual management of an agricultural holding or work in an agricultural holding for at least 5 years.(http://www.un.org/esa/agenda21/natlinfo/countr/poland/ruralDevelopment.pdf).

Modern agriculture requires a comprehensive knowledge (Kowalski, 1998). This statement applies particularly to managers of farms. For this reason, an important feature of farm managers, having a significant impact on production and financial effects of the business, is agricultural knowledge and skills.

Knowledge, in a situation of increasing competition, increasingly determines the amount of income from business activities (Klepacki, 2005). Thus, increasing skills and investing in agricultural education by individuals wishing to become professional farmers is a necessary condition for development. The farmer gains the skills needed for agricultural activities in various ways, but their formal reflection is the level of education, both general and vocational, particularly professional, i.e. relating to agriculture.

In Poland (in 2011), still about 20% of managers completed only primary school or secondary school. The proportion of farmers who left school at the statutory level decreased significantly compared to 2000, and was almost twice lower. Both in 2000 and in 2011, the most common was basic education; about 45-46% of farmers completed it. At the same time there has been a progress at secondary and post-secondary level (increase from 16 to 28%) and higher (percentage of managers of individual farms with this education increased from 3 to almost 7%). Studies confirmed further growth in a relatively big popularity of non-agriculture education among farmers. In 2000-2011, the share of people with school non-agricultural qualifications among managers increased from 40 to 53%. Improving the level of non-agricultural professional qualifications in the analyzed population should be considered as beneficial, not only from the point of view of diversification of economic activity and employment outside the farm, but also with regard to agricultural activities. Today, the effective operation of a farm requires a range of skills and competencies that go far beyond conventional preparation for the profession of a farmer (Alexandri, Chmieliński, 2013)

In Poland, the study program contains no data on land consolidation (Geodesy exception).

Development of roads, land improvement systems and social infrastructure

Land consolidation also promotes the development of roads and land improvement systems. In Poland, rural areas are characterized by low road density (approximately 48 km per 100 sq. km; source: Ministry of Agriculture and Rural Development) and poor condition of local roads (Rakowska, Wojewódzka-Wiewiórska, 2010). Many land plots do not have access to public roads and are subject to an easement. Land consolidation involves the development of a new road system, which facilitates access to individual plots and shortens the distance between farm fields and the farmstead. In Poland, road development is the main argument used by surveyors to elicit local community's participation in land consolidation.

Drainage ditches are renewed and rebuilt after the completion of land consolidation efforts. Land consolidation generates considerable benefits for farmers who experience flooding or drought due to the poor condition of drainage ditches. Land consolidation projects also involve zoning of common land. Commons may be created on land owned by the municipality or consolidation participants.

Administrative and legal proceedings

Land consolidation schemes eliminate the need for additional administrative and legal proceedings establishing joint ownership of agricultural land and common land. Land owners can distribute shares to property co-owners without having to cover the costs of legal and administrative proceedings. Common land is a form of collective ownership of agricultural land, forests and water bodies. It is reserved for the common use of all local residents. In Poland, commons are created by the State, rather than by the members of the local community. The associated rights or privileges of use are awarded to locally registered residents, which contributes to their uniqueness (Lipińska, 2010).

Pursuant to the provisions of Art. 5, section 1 of the Act of 29 June 1963 on commons management, common land may not be partitioned between commoners. The legislator has thus banned the dissolution of commons and has placed all commoners under the obligation to preserve collective ownership of such land. Collective ownership can be eliminated only through land consolidation that is approved by an absolute majority (Decision of the Supreme Court of 4 July 1997 [1997b], Ref. No. II CKN 227/97). During land consolidation schemes, land owners who do not reside locally are entitled to land in their place of residence as compensation for the land they lost (Leń, 2012).

4. Identification of the economic effects of land consolidation

The economic consequences of land consolidation have been discussed in numerous studies, therefore this aspects will be only briefly analyzed in the article. Land consolidation changes parcel shape, size and distance, saving time and triggering innovation by way of mechanization, although T. Van Dijk (2000) says the process also has another sequence: open markets bring competence. This calls for reducing production costs—mainly labour—with mechanization, and hence adapting parcels for mechanization (Crecente, Alvarez, 2002).

The degree of parcel scattering measures the distance among the parcels owned by a farmer. Comparison of this indicator before and after land consolidation will demonstrate the success of the performance in terms of potential time savings for vehicles using the local road network (Isla, Soy, 1998). Land consolidation also increases the size of parcels and, consequently, the amount of direct payments in virtue of land that did not qualify for the direct payment scheme in the past.

Table1

SWOT analysis of land consolidation projects

STRENGTHS	WEAKNESSES
• improved territorial structure of farms and forests (reduced number of parcels, improved parcel shape, increased area of plots and farms), • development of service roads, land improvement systems and networks of rural roads, • rational spatial configuration of agricultural plots, • plot boundaries are modified to accommodate land improvement systems, roads and relief features, • regulation of hydrological processes on consolidated land, • reclamation of degraded areas, • development of social infrastructure, planning common land, • distribution of rights and privileges to common land among members of the local community.	• high cost of reconstructing and renovating drainage ditches, • high cost of building local roads, • high cost of zoning land for purposes other than forestry and agricultural production, • land owned by farmers participating in consolidation schemes has varied territorial structure (farms have different size), • the parties participating in land consolidation have different interests, • high cost of land consolidation proceedings.
OPPORTUNITIES	**THREATS**
• reduced water and wind erosion, • reduced degradation of land improvement systems, • landslide prevention, • improved production efficiency through lowered production costs, labor input, transport time and fuel consumption, • reduced CO_2 emissions, • prevention of soil erosion and improved soil management, • members of the local community are actively involved in spatial planning processes, • improved plot parameters (larger area) entitle farmers to apply for subsidies, • the introduction of land improvement systems minimizes the risk of flooding and drought in consolidated land, • increased market value of consolidated farms and land, • making optimal use of the land-use structure and soil class for the needs of the chosen production system, • land consolidation projects actively involve members of the local community by creating new jobs, expanding the existing infrastructure and improving the quality of social services.	• negative impacts on biodiversity (higher share of paved areas, lower share of natural and semi-natural areas, elimination of mid-field trees and shrubs), • intensification of agriculture, • increased water and wind erosion, • social conflict between farmers and services responsible for land consolidation.

The territorial structure of farms can be improved through enlargement by incorporating the land of farmers who wish to abandon agricultural production or by incorporating the land owned by the Agricultural Property Agency, an organization responsible for implementing the national agricultural policy.

Land consolidation improves plot parameters, reduces the number of plots and improves access to public roads, which increases the market value of the resulting property. The analysis shows the benefit is more than threats and loss (Table 1). The main problem is the large financial outlays. Another problem is also a threat to the environment which cannot be predicted. Land consolidation can also go a number of advantages for the environment: reduced water and wind erosion, reduced degradation of land improvement systems, landslide prevention, reduced CO2 emissions, prevention of soil erosion and improved soil management. These are not the only benefits for agricultural production.

Conclusions

The process of management is one of decision-making by the performer of the task. It is generally understood that a decision is associated with making choices, solving problems that emerge, determining the goals and directions of activities, as well as determining the methods and means of accomplishing them. Acquisition of information and its use is very important at the stage of decision-making. This information should be processed in an appropriate way. This allows for a more efficient approach to the problem, the obstacle.

Land consolidation is a process that radically transforms rural areas. Successful consolidation schemes require the participation of the local community, and the relevant decisions should be made with the involvement of local inhabitants. Members of the rural community should be familiar with all aspects of the planned undertaking and should have rudimentary knowledge of the consolidation process in order to fully cooperate with the services responsible for land consolidation.

The presented SWOT analysis indicates that land consolidation is highly complex process. The results of the analysis can be disseminated to farmers to provide them with comprehensive and reliable information about the planned undertaking. The concepts addressed in the SWOT analysis should be explained in greater detail for the benefit of the local residents who are not experts in land consolidation.

Bibliography

1. Anspoka Z. (2012). Rural student and teacher in the modern global world: Aspects of teacher's professional competence. *Rural Environment. Education. Personality*. (REEP) Proceedings of the 5th International Scientific Conference No. 5. Jelgava, pp. 13-18.
2. Alexandri C., Chmieliński P., Drlík J., Dudek M., Karwat-Woźniak B., Koteva N., Krupin W., Maksymenko A., Spesna D., Tudor M., Wrzochalska A. (2013). Characteristics of farm managers in Poland and selected Central-Eastern European Countries. Punlikacje programu Wieloletniego 2011-2014. (Multiannual program publications 2011-2014) Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej (Institute of Agricultural and Food Economics), Poland. [online] [28.12.2014]. Available at http://ierigz.waw.pl/publikacje/raporty-programu-wieloletniego-2011-2014/13786,93,3,0,nr-841-characteristics-of-farm-managers-in-poland-and-selected-central-eastern-european-countries.html
3. Crecente R., Alvarez C., Frau U. (2002). Economic, social and environmental impact of land consolidation in Galicia. *Land Use Policy* Vol. 19, pp. 135–147.
4. Czudec A. (2013). The economic, environmental and social functions of small farms. *Village and Agriculture (Wieś i Rolnictwo),* Vol. 2 (159) / 2013, pp. 90-105.
5. Dacko A. (2006). Creating conditions for developing rural areas by use of land consolidation – theoretical aspect. *Infrastructure and Ecology of Rural* Areas Vol.2, pp. 29–39.
6. Dawidowicz A., Źróbek R. (2012). Determination of model attributes of a cadastral system in the light of recent scientific advancements. Reports and materials of the Polish Real Estate Scientific Society. *Journal of the Polish Real Estate Scientific Society.* Vol. 20/4, pp. 5-18.
7. Dobrzyńska N. (2003). Ochrona różnorodności biologicznej obszarów wiejskich w Polsce (Protecting biodiversity of rural areas in Poland). [online] [22.11.2014]. Available at *http*://www.ekoedu.uw.edu.pl/download/wyklady/Dobrzynska.doc (In Polish)
8. Domagała-Świątkiewicz I. (2005). *Nowe wyzwania i zagrożenia, Kraków.* (Environmental protection in the XXI century). [online] [26.11.2014]. Available at http://fundacja.ogr.ar.krakow.pl/monografie.htm (In Polish)

9. Dudzińska M., Kocur-Bera K. (2014a). Information on the Environment and its Protection in Real Property Management. *Real Estate Management and Valuation*. Vol. 22, pp. 93–103.
10. Dudzińska M., Kocur-Bera K. (2014b). Land consolidation as the driving force behind ecological and economic development of rural areas. *The 9th International Conference Environmental Engineering – Selected Papers*, Vilnius, III, 1-7. [online] [26.11.2014]. *(1994–1996).* Working Paper ARINCO 97. ES.06.001UE, European Commission.
11. Kampka F. (2009). Social principles of sustainable rural development. *Komunikowanie i doradztwo w rozwoju obszarów wiejskich*. Wydawnictwo SGGW. Warszawa, Poland.
12. Katane I. (2005). Rural School as Multidimensional Education Environment: *Conceptual Model in Aspect of Education Ecology*. Proceedings of the Fourth International Conference "Person. Color. Nature. Music", Daugavpils University, Daugavpils, Latvia, pp 173-188.
13. Klepacki B. (2005). The importance of knowledge and education in the development of agriculture. *Zagadnienia Ekonomiczne* Vol. 2, pp. 47-57
14. Koreleski K. (1987). Land protection in the work of land consolidation - the study of objects from the area of the southern Polish. *Geodezja i Urządzenia Rolne* Vol. 6, pp. 27–32.
15. Korelewski K. (2009). Protection and shaping of agricultural areas within the system of rural landscape creation. *Infrastructure and Ecology of Rural Areas.* Vol. 4/2009, pp. 5–20.
16. Kowalski A. (1998). Factors of production in agribusiness. In: Woś A. (ed.). *Encyklopedia Agrobiznesu.* Fundacja Innowacja.
17. Laizāne A., Katane I. (2012). *The Evaluation of the Fluctuation of Educational Environment of Latvian Rural Schools.* 20 Years For Sustainable Development: Learning From Each Other. Lithuania, pp. 184-196.
18. Leń P. (2012). Patterns in the size of plots belonging to out-of-village owners on the example of villages in Brzozów district. *Infrastructure and Ecology of Rural Areas* Vol. 1, pp. 137–145.
19. Lipińska I. (2010). Rola i funkcjonowanie wspólnot gruntowych we współczesnych warunkach gospodarczych (The role and functioning of the joint land in modern economic conditions). *Zeszyty naukowe SGGW w Warszawie* (Scientific Papers of Warsaw University of Life Sciences), Poland. (In Polish)
20. Rakowska J., Wojewódzka-Wiewiórska A. (2010). *Spatial diversity of rural areas in Poland - the state and prospects of development in the context of functional relationships.* Ekspertyza wykonana na zamówienie Ministerstwa Rozwoju Regionalnego, Warszawa (The report drawn up by the Ministry of Regional Development Warsaw), Poland.
21. Riddell J., Rembold F. (2000). Farmland Rationalization and Land Consolidation: Strategies for Multifunctional use of Rural Space in Eastern and Central Europe. *Food and Agriculture Organization. Rome.* [online] [22.11.2014]. Available at http://www.fao.org/sd/ltdirect/ltan0018.htm
22. Sikorska A. (2011). Uwarunkowania rozwoju kapitału ludzkiego w rolnictwie i na obszarach wiejskich. (Conditions for the development of human capital in agriculture and in rural areas). Raport PW nr 1. IERiGŻ-PIB, Warszawa, Poland. (In Polish)
23. Siuta J., Żukowski B. (2010). Development and potential threats to agro-ecosystems. Ochrona *Środowiska i Zasobów Naturalnych Vol*. 43 pp. 80-103.
24. Stanny M., Czarnecki A.(2011). Sustainable rural development - a study on the area of the Green Lungs of Polish. Próba analizy empirycznej, IRWiR PAN, Warszawa 2011.
25. Thomas J. (2006). *What's on Regarding Land Consolidation in Europe*? In: Proceedings of the XXIII FIG Congress, Shaping the Change, October 8-13, Munich, Germany. [online] [25.11.2014]. Available at http://www.fig.net/pub/fig2006/papers/ts80/ts80_03_thomas_0311.pdf
26. Wawer R., Nowocień E. (2006). Mapa erozji wodnej aktualnej w oparciu o CORINE Land Cover 2000. (Map of current water erosion based on CORINE Land Cover 2000). *Pamiętniki Puławskie* Vol. 142, pp. 537–546. (In Polish)
27. Weiss E., Maliene V. (2004). *Flurbereinigung in der Bundesrepublik Deutschland* (Land consolidation in the Federal Republic of Germany)**.** Technika, Wilno. (In German)
28. Van Dijk T. (2000). Effects of land consolidation in practice: Analysis of post-war experience in the Netherlands. In*: Proceedings of the Seminar on Land Markets and Land Consolidation in Central Europe*, UDMS, 2000.
29. Zhang Q., Luo H., Yan J. (2012). Integrating biodiversity conservation into land consolidation in hilly areas – A case study in southwest China. Acta Ecologica Sinica Vol. 32 pp. 274-278.

Prospective Hospitality Managers Competence as Integral Part of Competitiveness

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Abstract: The factor of the success of the performance of hospitality companies is the competitive, professional staff, which can ensure successful communication with customers and provide qualitative services. One of the most important indicators of a specialist's competitiveness is his or her competency. The aim of the article is to publicize the results of the conducted theoretical research in the field of Ecology of Education and Concurrentology. The methods of research: theoretical research – study, analysis and evaluation of scientific literature and the corresponding documents; reflection of authors' personal experience. The main conclusion - the structure of the competitiveness of the prospective manager of Hospitality Company consists of three components: personality and professional progress, self-management and the competence component of the environment of professional activities.

Keywords: competitiveness, competence, environment of professional activity, higher education.

Introduction

Nowadays it is possible to observe the increase of the role of education, especially – the role of higher education, for the facilitation of the competitiveness of population and national economy of Latvia within the context of globalization and integration processes. The facilitation of the professional development of prospective specialists, including hospitality managers, within the study process at a higher education institution becomes topical, in order the new specialists would be able to integrate into the labour market successfully and prove their competitiveness in the environment of professional activities. One of the most important indicators of a specialist's competitiveness is his or her competency. We could paraphrase the well-known expression as follows: *tell me about your competency, and I'll tell about your competitiveness*!

The industry of hotels, restaurants and public catering is one of the most rapidly developing in Europe. It is an important source of work places in the sphere of services. In 2013 there were 10 million people employed in the hospitality industry, in Latvia – 46,000 people or 5% out of all employed (The Hospitality Sector…, 2013). The factor of the success of the performance of hospitality companies is the competitive, professional staff, which can ensure successful communication with customers and provide qualitative services. The surveys of industry experts show that the companies lack 40-50% of line employees, but upper management - 80-90%. Only 12-15% graduates of higher education institution continue to work in the industry, besides – the average period of employment in the industry is 1-1.5 years (Наумова, 2012). One of the reasons of such statistics is the preparation of specialists who have not sufficiently developed professional competencies, especially emphasized is the communication with customers and the behaviour in the environment of professional activities in different situations. Thus there is an objective necessity to change thinking, as well as to change the education of prospective hospitality industry specialists by grounding the studies at the higher education institution on *ecological approach,* which opens up a wide perspective for the development of prospective specialists' competitiveness, including the competency of the environment of professional activities.

The aim of the article is to publicize the results of the conducted theoretical research in the field of *Ecology of Education* and *Concurrentology*. The methods of research: theoretical research – study, analysis and evaluation of scientific literature and the corresponding documents; reflection of authors' personal experience.

Methodology

Ecological paradigm in education actualizes the significance of students as the prospective specialists' interaction with environment – the educational environment and the environment of professional

activities – for the development of their competitiveness. Therefore one of the conceptual approaches within out research is ***the ecological approach*** in the study process, including the organization of professional training, facilitating the competitiveness of prospective managers of hospitality companies as the specialists, including their readiness for professional activities in the changing environment of hospitality industry. The important educational task, according to the aspect of ecological approach, is to create balance between the sustainability and constantly increasing contradictory and competitive differences, information flows, which often create disbalance, conflicts and stress. (Katane, 2007; Katane, Kalniņa, 2010; Katane, Baltusite, 2007; Briede, Pēks, 2011).

The environment of competitive education ensures the development of a competitive specialist's *competency*. The hospitality is a very specific sphere, where there are two types of products created simultaneously – a material product – food, beverages, a room in a hotel – and an intangible product - service, which makes *the environment* of the activities of hospitality companies unique and original, therefore it is necessary to substantiate the concept ***the competence of the environment of professional activities*** within our future research, because competency develops by cognizing the environment of professional activities, performing varied activities in this multidimensional environment of professional activities, as well as by developing environment-friendly thinking, proving environment-friendly and responsible actions through own professional activities.

But *the structural approach* enables us, when substantiating the concept of competitiveness, to identify *several components* both in the structure of *competitiveness* (Floren, 1998; Katane, 2010; Katane, 2011; Katane, Kalniņa, 2010; Андреев, 2006; Митина, 2003) and *competence* as the structure of the component of competitiveness (Kadishi, 2001; Keen, 1991; Raven, 1984; Зеер, 2005).

In this report we offer our views on the basis of conclusions drawn by several authors (Ivanenko, Khairova, Fajzrakhmanova, Khalilova, Kharisova, Lisitzina, Shaimukhametova, 2015; Katane, Kalniņa, 2010; Zhuina, 2014; Деркач, 2004; Митина, 2003; Хазова, 2011), where the competence is substantiated as a structural component of competitiveness.

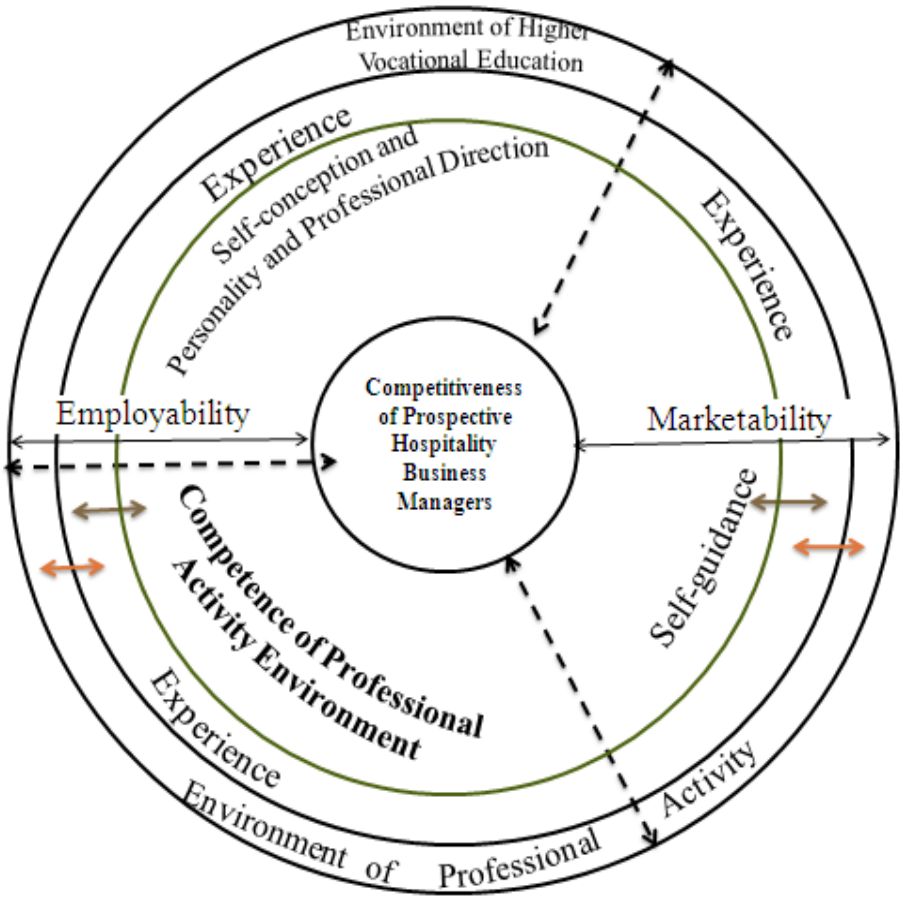

Figure 1. The model of the competitiveness of the prospective managers of hospitality companies.

There are 3 structural components identified in the model of the competitiveness of the prospective managers of hospitality companies (Figure 1): the component of personality and professional progress, the self-management component and the component of the competency of the environment of professional activities, which is one of the most important elements of competitiveness and enables a specialist to develop his or her career and fulfil his or her professional functions under the continuously changing conditions of professional environment and labour market. The basis for the competitiveness is experience, which had been obtained in the environment of higher education and professional activities. The important indicators of a specialist's competitiveness are his or her *employment* (an indicator of competitiveness determined by environment) and *employability* (an indicator of competitiveness resulting from and depending on the specialist), as well as *marketability* in the labour market.

Functional and evolutionary approach enable to study the competitiveness not only as a result, but also as a phenomenon, which continuously develops within the developmental process (evolutionism) of education, personality and professionalism and manifests through activities (functionality) (Hansen, 2008; Peters, Waterman, 2004; Гарафутдинова, 1998; Лаврентьев, Лаврентьева, Неудахина, 2002; Потемкина, 2004). Thus this conclusion shall be related also to the competence as an integral part of competitiveness.

Results and discussion

Concept of competence and its structure within the context of competitiveness

The concept *competence* is not unambiguous; sometimes it is called *a fuzzy concept*, because it is specified and improved on an ongoing basis (Boon, van der Klink, 2002). There is a vast diversity of the substantiations, interpretations and definitions of the concept of competence.

Competence-based education developed in 1970ies. Its development was facilitated by several factors – both at the European level and globally: firstly, the rapid development of innovations of products, processes and technologies brought about the necessity to adjust the studies to the labour market, which is a precondition for the second factor, namely, education oriented towards the result becomes important or the traditional, supply-driven model of educational system is replaced by demand-driven model. The third factor is related to the lifelong learning policy. In some European countries, in France (*"Bilan de Compétence"* – system for the accreditation of professional training), Ireland and Great Britain (*the "Accreditation of Prior Learning" system*), Germany (*the "Criteria Reference Testing" system)* there are skills identified and certified, which have been acquired in the non-formal and informal education (Bjørnåvold, 1997). The emphasis of this policy is related to the fourth factor – to broaden the learning opportunities, including an opportunity to obtain competencies, by offering "stairs" to those who have had no formal education and practical training opportunities but have practical experience. The fifth factor is also related to the European lifelong learning policy – the traditional education, professional training and development of experience shall be integrated into the competency-based approach. The sixth factor could be seen in the European Employment Strategy, where there is an emphasis on the necessity to improve the skills and qualifications of an employed person, and to facilitate his or her mobility, thus developing the professional competency (Delamare Le Deist, Winterton, 2005).

American psychologist D. McClelland (McClelland,1973) in the article "Testing for competence rather than for intelligence", published in the journal "American Psychologist", points out that the results of academic tests, the existence of diplomas do not ensure the person's ability to perform his or her work well. D. McClelland substitutes the narrower concept *skill* by *competency*, including into it behavioural aspects and technical abilities. He emphasizes that it is the competency distinguishes an excellent employee from an average one. While continuing the work of D. McClelland, in 1984 in London the British scientist J. Raven in the work „Competence in Modern Society. Its Identification, Development and Release" (Raven, 1984) writes that the competence is in a human being as the biological inheritance, abilities, dispositions and other individual qualities. It has subjective nature; however, the competence forms and develops depending on the objective conditions. Each sphere of activities requires a different totality of competences, which form the specialist's proficiency.

Professor of Latvia University of Agriculture B. Briede (Briede, 2004) has suggested a definition of competence: it is a totality of knowledge, skills and abilities to reflect, which could be tested in a documentary manner and through the activities in which an individual agrees to participate actively and with responsibility. The scientist emphasizes the important personality's *ability* – to adapt to the changing *environmental* conditions. Scientist D. Clark (Clark, 2010) connects competence with *abilities*; however, the concept ability usually means either the ability to do something or a special talent, but the competences are closely related to knowledge and experience, to the quality of performance. An individual obtains competence by acquiring knowledge, practicing, obtaining experience.

M. Eraut (Eraut, 2003) has defined competence as *an ability* to fulfil assignments and roles provided by the expected standards. This definition views competence as the acquisition of standards determined by the society. J. Stabins (Stabiņš, 2001) views competence as *an ability* obtained within the educational process and based on knowledge, experience and attitude. Such ability manifests as a skill – readiness for activities.

Latvian scientist T. Koke (Koķe, 2003) defines competence as a result of studies. If an individual is able to focus and apply his or her knowledge, experience and skills quickly in a particular professional situation, this characterizes him or her as a professionally successful personality and a competitive specialist.

Some scientists (Duffy, Petrovic, Crespo, 2010) relate the concept of competence to the sphere of professional activities. In this case the competence is viewed as the manifestation of *abilities* through professional activities.

T. Friedman (Friedman, 2013), the well-known journalist of the newspaper „New York Times", states that the world only cares and would pay for your *ability* to achieve something by applying your knowledge... We are advancing towards the competency-based world, where people do not care, how you acquire the competency – in the e-environment, by studying at a higher education institution for 4 years or by attending the courses organized at the company – but there is a significant demand for the evidence that you have acquired the particular competency.

Irrespective of the fact that there are many and different definition of competencies, B. Mansfield (Mansfield, 2004) has aggregated, evaluated and supplemented the most common ones, emphasizing three approaches to the defining of a competence: 1) the competence could be observed through an activity – it describes the present process; 2) the competence is a result of an activity or a professional standards, which describes what an individual shall do in order to hold a particular office; 3) the competence is the person's most characteristic qualities, which describe the person.

Scientist B. Briede has added the fourth approach, namely, the competences are define using several approaches (Hoffmann, 1999, 276; cited by Briede, 2009).

Literature analysis on competence shows that this concept is viewed in a holistic way, as a structure, consisting of different components.

At the beginning of 1980ies, German sociologist and philosopher J. Habermas (Habermas, 1981; 1984) defined the competence as an individual's *ability* to use the acquired in practice, "to handle" knowledge, skills, attitudes, to apply them creatively in a corresponding situation and improving; however, it is not knowledge, skills and attitudes in a particular sphere of activities, which could be actualized.

Scientist B. Kadishi (Kadishi, 2001) points out that the competence is an individual combination of a personality's knowledge, *abilities* and attitudes for the achievement of a particular goal. They could be taught, developed and actualized on the basis of external impulse and internal energy. Researcher emphasizes that competence is always connected with an action, its expression depends on a particular situation and individual potential, namely, it manifests within a particular context and is oriented towards an aim. Similar conclusions could be found also in Le Boterf's (Le Boterf, 1998) publication.

K. Keen (cited by Marshall, Kinuthia, 2009), by means of a metaphor, has described the competence as a hand with fingers: skills, knowledge, experience, contacts, values, which is coordinated by palm and controlled by nervous system that manages an arm on the whole.

Scientist J. Raven (Raven, 1984) points out that the competence has many components, which enable the personality to achieve goals important for the particular personality. The scientist divides these components into 3 groups: cognitive, affective and volitional components. The components of competence are relatively independent; they possess cumulation and substitution abilities. British psychologist believes – the older a person becomes, the more important for the development of competences is the personality's values system instead of personality's abilities.

Researcher R. Boyatzis (Boyatzis, 2008) emphasizes that the competences are necessary for the efficient fulfilment of work; however, they are not decisive, if competences do not correspond to the functional requirements of work and organizational culture. This statement explains the fact, why, when a person changes his or her job, and together with the job – also the environment, efficiently working employees cannot achieve good results. As well as the fact, why, when a person is promoted, the executor of the work cannot achieve good results by performing the analogous work. As well as the fact, why the executors with excellent professional achievements often do not achieve the same results in other spheres. When explaining competences, the scientist emphasis the essential role of a motive, namely, the motives of any activity are hidden in the subconsciousness, but knowledge and skills are the result of a personality's conscious behaviour, thus the manifestation of one and the same competence level may differ.

Scientist E. Zeer (Зеер, 2005) views competence as an integration of knowledge, skills and experience in the social-professional situation. It is *an individual's ability to implement the totality of his or her competences through practical activities*. According to the scientist's point of view, the competence has procedural nature.

In the European Qualifications Framework for lifelong learning document (Eiropas kvalifikāciju ietvarstruktūra .. , 2009) the concept *"competence"* means "the proven *ability* to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development". The competence is described in terms of responsibility and autonomy. In the descriptions of knowledge, skills and competence, provided in the document, the emphasis is placed on results, their display, namely, "knowledge" means the outcome of the assimilation of information through learning. Knowledge is related to a field of work or study. In the context of the European Qualifications Framework, knowledge is described as theoretical and/or factual. But *skills* mean the personality's qualities, thanks to which an individual is able to apply knowledge in practice, completing practical tasks and solving theoretical problems. In the context of the European Qualifications Framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments).

The authors of the report find that competence, being a component of competitiveness, is a totality of the qualities of a student as a prospective specialist, the result of studies, and an ongoing developmental process. Thus we can state that competence is not static, it is in the ongoing process of development, renewal and improvement. This enables to substantiate the development of a competitive person's competencies as ***a process***. The personality continuously develops and changes on the whole during the educational process and the process of professional activities. This means that its different qualities or their integral totalities also develop and change. Therefore the competency develops alongside with the development of a student's personality and the professional development of a prospective specialist. At the same time the competence is also ***a result***, which is established, fixed and evaluated at a particular moment of a study process. The result should meet the aims of a particular study course at a particular stage of studies, and it could be assessed and evaluated according to the clearly defined evaluation criteria. After the evaluation of each competence, the next developmental stage of a competence begins within the study process, and it has cyclic nature: the aim in connection with the forecasted result of studies, the development of competence during the study process, the evaluation of the competence as a result of studies at the end of a particular stage of

studies (cycle). Each new developmental stage of competence during the study process starts with the acquisition of new knowledge, its application in practice, developing new skills or improving the existing ones, as well as with the development of new abilities for performing independent and responsible activities or the improvement of existing abilities for a new level of quality (Figure 2).

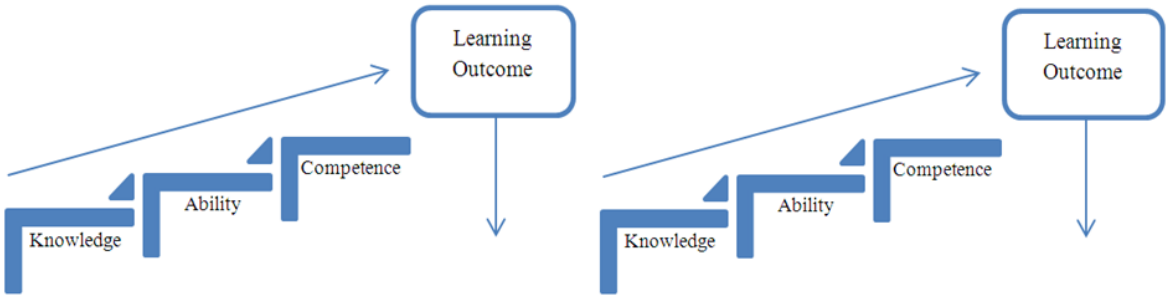

Figure 2. Competence as Learning Process and Outcome at the University.

Since the development of competence is closely related to the specialist's professional development, this process might last all life in the educational environment and also in the environment of professional activities within the context of career development.

Irrespective of the fact that there are many and different explanations of the concept *competence*, the interpretations of the components of competence structure, each of them have a practical value for the cognizing of this phenomenon. Within the framework of all studies, it has been, to certain extent, related to the quality of a personality's professional performance abilities, environment, where such activities take place, and to the quality of performance. The authors of the report find that ***competence is an integral totality of specialist's several abilities, which manifests through different independent activities according to the situation and set goals, including the ability to integrate into the environment of professional activities and to act with responsibility in a particular situation and period of time, where the responsible action is the expression and implementation of values-based attitudes through the professional performance.***

Conclusions

- The structure of the competitiveness of the prospective manager of hospitality company consists of three components: personality and professional progress, self-management and the competency component of the environment of professional activities. Thus, the competency of the environment of professional activities is an integral part of the structure of competitiveness. Therefore the competency develops alongside with the competitiveness and vice versa.
- There is a vast diversity concerning the theoretical substantiation of the concept *competence*. On the basis of the results of theoretical research, the authors of the report have suggested the following definition of competence: *competence is an integral totality of a specialist's several abilities, which manifests through different independent activities according to the situation and set aims, including the ability to integrate into the environment of professional activities and to act with responsibility under certain circumstances and in a particular period of time, where the responsible action is the expression of values based attitude and its implementation in the individual's professional activities.* Besides, the competence is: 1) an integral totality of the qualities – abilities – of a student as a personality, 2) the result of study process, 3) an ongoing process, which is related to the development and career growth of the prospective specialist.
- The results of theoretical research show a new perspective, namely, on the basis of ecological approach in research, to actualize and theoretically substantiate *the competence of the environment of professional activities* as a component of a prospective specialist's competitiveness.

Bibliography

1. Bjørnåvold J. (1997). Assessment of non-formal learning: the quality and limitations of methodologies, The European Vocational Training Journal, Vol. 12, pp. 52–67.
2. Boon J., van der Klink M. (2002). Competencies: the triumph of a fuzzy concept. Proceedings of the Annual Conference of the Academy of Human Resource Development, Vol. 1, pp. 327-334.
3. Boyatzis R.E. (2008). Competencies in the 21st century. Journal of Management Development, Vol. 27(1), pp. 5-12.
4. Briede B. (2004). Education for Getting Competence from Constructivists Perspective in the Context of Environment. Proceedings of the International Scientific Conference Research for Rural Development 2004. Jelgava, LLU, Latvia, pp. 215-221.
5. Briede B. (2009). Competence components in relation to its approaches. Proceedings of the International Scientific Conference New Dimensions in the Development of Society. Jelgava, LLU SZF, Latvia, pp. 8
6. Briede B., Pēks L. (2011). Ekoloģiskā pieeja izglītībā (Ecological approach in education). Jelgava, University of Agriculture, Latvia, pp. 160. CD-ROM. (In Latvian)
7. Clark D.R. (2010). Introduction to Competencies. [online] [17.01.2015]. Available at http://www.nwlink.com/~donclark/hrd/case/compet1.html
8. Delamare Le Deist F., Winterton J., (2005). What is Competence? Human Resource Development International, Vol. 8(1), pp. 27-46.
9. Duffy P., Petrovic L., Crespo M. (2010). The European framework for the recognition of coaching competence and qualifications – implications for the sport of athletics. New Studies in Athletics, Vol. 25(1), pp. 27-41.
10. Eiropas kvalifikāciju ietvarstruktūra mūžizglītībai (EKI) (2009). (European Qualifications Framework for Lifelong Learning). Online] [23.12.2014]. Available at http://ec.europa.eu/ploteus/sites/eac-eqf/files/broch_lv.pdf
11. Eraut M. (2003). Zertifizierung non-formell und informell erworbener beruflicher Kompetenzen (The certification of vocational competences that have been obtained non-formally or informally). Waxmann, Münster, Deutschland, S. 260. (In German)
12. Floren, G.L. (1998). Marketable skills and attitudes. MiraCosta College, California. Retrieved 12.01.2015. from: http://www.miracosta.edu/home/gfloren/market.htm#Careers
13. Friedman T.L. (2013). The Professors' Big Stage, New York Times. [online] [12.01.2015]. Available at : http://www.nytimes.com/2013/03/06/opinion/friedman-the-professors-big-stage.html
14. Habermas J. (1981). Theorie des kommunikativen Handelns. Handlungsrationalität und gesellschaftliche Rationalisierung (The theory of communicative action. Reason and the rationalization of society). Suhrkampf, Frankfurt am Main, Germany, S. 533 (In German)
15. Habermas J. (1984). Vorstudien und Ergänzungen zur Theorie des Kommunikativen Handelns (Preliminary studies in the theory of communicative action). Frankfurt am Main, Suhrkampf, German, S. 575. (In German)
16. Hansen K. (2008). Emphasizing your Transferable and Marketable Skills in Your Cover Letter. [online] [17.01.2015]. Available at: http://www.quintcareers.com/cover_letter_transferable_skills.html
17. Hoffmann T. (1999) The Meanings of Competency. Journal of European Industrial Training, Vol. 23(6), pp. 275-285.
18. Ivanenko N.A., Khairova I.V., Fajzrakhmanova A.L., Khalilova T.V., Kharisova G.M., Lisitzina T.B., Shaimukhametova S.F. (2015). Competitiveness of Professional Education: Purposes, Tasks and Factors of Its Participation in the International Educational Services Market. Asian Social Science, Vol. 11(1), pp 369 – 374
19. Kadishi B. (2001). Schlüsselkompetenzen wirksam erfassen – Personalselektion ohne Diskriminierung (Efficient acquisition of basic skills - prevent discrimination in hiring). Tobler Verlag, Altstätten, S. 144. (In German)
20. Katane I. (2007). No ekoloģiskās paradigmas līdz vides modelim izglītības pētniecībā (From ecological paradigm to environmental model in research of education). Sērija „Izglītības ekoloģija". Jelgava, LLU, Latvia, 239 lpp. (in Latvian)
21. Katane I. (2010). Competitiveness of Personality as a New Concept in Modern Education and Pedagogy Science. Proceedings of the 9th International scientific Conference Engineering for Rural Development, Volume 9. Jelgava, LLU, Latvia, pp. 327-334.
22. Katane I. (2011). Methodological Bases for Evaluation of Specialist Competitiveness. Engineering for Rural Development: Proceedings of the 10th International Scientific Conference Engineering for Rural Development, Volume 10. Jelgava, LLU, Latvia, pp. 524 – 529.

23. Katane I., Baltusite R. (2007). Ecological Approach for the Formation and Development of Prospective Teachers' Readiness for the Professional activities at Latvian Schools. Transformations in Business & Economics, Vol. 6, No 2 (12), pp.114 – 132.
24. Katane I., Kalniņa I. (2010). Skolēnu personības konkurētspējas attīstība neformālās komercizglītības vidē (Competitiveness development of students' personality in environment of non-formal commercial education). Jelgava, LLU, Latvia, 331 lpp. (In Latvian)
25. Koķe T. (2003). Nepārtrauktā izglītība: galvenie uzdevumi un to īstenošana (Continuing education: main tasks and their implementation). Nepārtrauktās izglītības sociāli pedagoģiskie aspekti (Socio-pedagogical aspects of continuous education). Izglītības soļi, Rīga, Latvia, 4.-16. lpp. (In Latvian)
26. Le Boterf G. (1998). Évaluer les compétences. Quels jugements? Quels critères? Quelles instances? (Assessment of Competencies. Which Judgements? Which Parameter? Which Instances) Education permanente, Vol. 135(2), S. 143-151. (In French)
27. Mansfield B. (2004). Competence in transition. Journal of European Industrial Training, Vol. 28 (2/3/4), pp. 296 – 309.
28. Marshall St., Kinuthia V., Taylor W. (Eds.). (2009). Bridging the Knowledge Divide. Educational Technology for Development. USA. Information Age Publishing Inc., 413 p.
29. McClelland D.C. (1973). Testing for competence rather than for intelligence. American Psychologist, 28, pp. 1-14.
30. Peters T., Waterman R. (2004). In Search of Excellence: Lessons from America's Best-run Companies. New York: Harper Business Essentials, pp. 400.
31. Raven J. (1984). Competence in Modern Society: Its Identification, Development and Release. H. K. Lewis&Co, London, England, pp. 260.
32. Stabiņš J. (2001). Skolotāja misija (Teacher's mission). RaKa, Rīga, 72 lpp. (In Latvian)
33. The Hospitality Sector in Europe: An assessment of the economic contribution of the hospitality sector across 31 countries (2013). [online] [02.01.2015]. Available at: http://www.ey.com/Publication/vwLUAssets/The_Hospitality_Sector_in_Europe/$FILE/EY_The_Hospitality_Sector_in_Europe.pdf
34. Zhuina D. V. (2014). The acmeological center the results of its activity of fostering competitive specialists. Life Science Journal, Vol. 11(8), pp. 539 – 541 [online] [15.01.2015]. Available at http://www.lifesciencesite.com/lsj/life1108/074_24827life110814_539_541.pdf
35. Андреев, В.И. (2006). Конкурентология (Concurrentology). Казань, Центр инновационных технологий, Россия, 468 с. (In Russian)
36. Гарафутдинова Н.Я. (1998). Конкурентоспособность будущего специалиста высшей квалификации как показатель качества его подготовки (Competitiveness of prospective specialists the highest qualification as indicator of their training quality), Вестник Омского университета, Vol. 1, 76-78. с. (In Russian)
37. Деркач А. (2004). Акмеологические основы развития профессионала (Acmeological basis for the development of a professional). Москва, Воронеж: НПО МОДЭК, 752 с. (In Russian)
38. Зеер Э.Ф. (2005). Компетентностный подход к образованию (Competency-based approach to education). Образование и наука. Известия Уральского отделения Российской академии образования, Vol. 3(33), 27-40. с. (In Russian)
39. Лаврентьев Г.В., Лаврентьева Н.Б, Неудахина Н.А. (2002). Инновационные обучающие технологии в профессиональной подготовке специалистов (Innovative educational technologies in the professional training of specialists). Барнаул, Алтайский Государственный университет, Ч.1., Россия,156 с. (In Russian)
40. Митина Л.М. (2003). Психология развития конкурентоспособной личности (Psychology of a competitive person's development). МПСИ, Москва, Россия, 400 с. (In Russian)
41. Наумова Г.Р. (2012). Развитие общих компетенций в профессиональной подготовке специалистов гостиничного сервиса (Developing generic competencies in professional training of hospitality specialists - PhD. thesis). Институт развития образования, Екатеринбург, Россия, 292 с. (In Russian)
42. Потемкина О.Ф. (2004). Психологическая диагностика конкурентоспособности профессионала (Psychological diagnostics of professionals competitiveness). Статьи конференции Психологическая диагностика и тестирование персонала. [online] [17.01.2015]. Available at http://www.psycho.ru/library/875 (In Russian)
43. Хазова С.А. (2011). Критерии развития конкурентоспособности личности (Criteria for development of person's competitiveness). Вестник Адыгейского государственного университета. Серия 3, Педагогика и психология, Vol. 2. (In Russian)

Evaluation of Specialists' Competitiveness in the Supportive Environment of Modern Insurance Enterprise

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Abstract. The competitiveness of enterprise to a great extent depends on the competitiveness of each employee as a specialist, therefore it is important to evaluate the specialists' competitiveness and promote its development at modern enterprises. Modern competitive specialist is characterized by the following qualities/indications: 1) the indicators, characterizing personality's self-conception; 2) well-developed self-regulation and self - management; 3) different competences, including professional competency; 4) personality's orientation, including purposes of life and career, motives, attitudes, values, responsibility etc. While developing the methodology for the evaluation of staff's competitiveness at a modern enterprise, it was important to use this methodology for empirical research, including the evaluation of staff's competitiveness at one of the International Insurance Agencies in Latvia according to several indications of competitiveness. There were two parts of research: 1) the evaluation of specialists' competitiveness; 2) elaboration of *Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise*.

Keywords: evaluation, modern enterprise, specialist's competitiveness, support and promotion system.

Introduction

Since Latvia became the Member State of the European Union, the importance of our society's competitiveness, the competitiveness of our enterprises and each member's competitiveness had become even more important. The development of the competitiveness of the population of Latvia and the national economy must be ensured. The important means for the development of competitiveness are lifelong and lifewide education, therefore enterprises and other various institutions become learning organisations that promote the professional development and competitiveness of their staff. The competitiveness of an enterprise to a great extent depends on the competitiveness of each employee as a specialist, therefore it is important to evaluate the specialists' competitiveness and promote its development at modern enterprises.

The ecological and synergetic paradigms in social sciences, including education sciences, enable to study a personality and/or an organization as a self-developing, self-organizing and self-evaluating system that functions in various spheres and learns to live, plan and forecast; constructs and accumulates its own experience; that is able to choose and to be responsible for the consequences of its own actions under the conditions of modern changes. The synergetic approach enables to draw a conclusion that nowadays an individual and/or an organization as open (dissipative) system must learn to live and change in the interaction with the changeable environment (Katane, 2007).

As we can see, in the old paradigm the competitiveness more often is related to the personality's success and victories over its competitor, sometimes it is related to an image of a harsh fighter, who has no mercy towards the enemy, competitor and who considers any means useful for achieving the goals. It is possible to draw the following conclusions from the substantiation of *the new paradigm of competitiveness*: crisis shall be attributed to all, even to the most successful entrepreneurs, the most advanced society and economy; however, to be competitive means to be able to adapt to new conditions, to overcome difficulties and to achieve more than before — before the crisis. In the new paradigm the ability to change, to live and develop in the changeable environment is particularly important. The development of an entrepreneur's (businessman's) competitiveness nowadays is related not only to the features characteristic to a leader, but, first of all, to the socio-psychological and moral characterizing indicators, the interaction of a personality with society, attitude towards other people, oneself, duties, moral and ethical values.

There are three spheres of the development of a specialist's competitiveness: 1) the sphere of professional activities; 2) the sphere of interaction with the environment, including interaction with social environment - other people; 3) the sphere of a personality's self-development, including self-awareness and self-determination.

The aim of article is to publish results of theoretical and empirical research, including evaluation results of specialists' competitiveness and the worked out *Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise.*

Methodology

During several years the authors of this article performed research in collaboration with Gita Katana (the chief specialist of corporation "Balta" in Latvia).

Several trends of our theoretical research served as the methodological substantiation for the evaluation of specialists' competitiveness and creation of *Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise.*

Theoretical basis of our research was the following:

- ***Career Counselling*** (Bloch, 2004; Goodman, Hoppin, 2007; Katane, Penķe, 2009; Kuijpers, Schyns, Scheerens, 2006; Melvin, Hale, Foster, 2014; Толочек, 2005);
- ***Concurrentology, including substantiation of the concepts: personality's competitiveness and /specialist's competitiveness*** **(**Floren, 1998; Katane, 2010; Katane, 2011; Katane, Īriste, 2013; Katane, Kalniņa, 2010; Peters, Waterman, 2004; Андреев, 2006; Митина, 2003);
- ***Management Sciences, including Personnel Management*** (Caune, 2005; Dāvidsone, 2008; Forands, 2004; Katana, 2012; Katane, 2014; Katane, Kristovska, 2012; Katane, Kristovska, Katana, 2013; Kristovska, 2011);
- ***Mentoring*** (Achinstein, Athanases, 2006; Daloz, 1986; Jūsela, Lillia, Rinne, 2005; Kačkere, Odiņa, Rieksta, 2005; Katane, Laizāne, 2012; Konstantinova, Rivža, 2007; Konstantinova, 2008).

Research methods: analysis and evaluation of scientific literature, a questionnaire, modelling, performing mathematical processing of data.

The research was divided into two parts: 1) the evaluation of specialists' competitiveness; 2) elaboration of Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise.

In order to support and promote the development of a specialist's competitiveness at an enterprise, in the beginning it is important to answer the following questions: What is competitiveness? What is the methodological basis for the assessment of competitiveness? These questions could be answered by studying the results of research performed in the field of *Concurrentology*.

It is possible to observe two tendencies in the substantiation of a specialist's competitiveness. These tendencies are related to the liberally rational and humanistic paradigms in education: 1) scientists of economics and other disciplines, on the basis of regularities, categories, conceptions, theories of economics, try to use transfers for the development of the definitions of a specialist's competitiveness; 2) the representatives of pedagogy and psychology sciences develop the substantiation of *a personality's competitiveness* and/or *a specialist's competitiveness* on the basis of humanistic and ecological approach in education. The competitiveness of a specialist is related to his or her *marketability and employability in the labour market* (Katane, 2011; Katane, Īriste, 2013).

C*ompetitiveness* is an integrative totality of an individual's qualities (qualities of a personality and a specialist) that ensures its viability, including development and self-actualization, under the conditions of changing environment. *The basis for the personality's competitiveness is experience.* The competitive personality is characterized by the following qualities/features: 1) the characterizing indicators of a personality orientation and self-conception, including determination and action oriented towards success; the readiness to overcome difficulties and take a risk; persistence, adequate self-assessment and daring to take a risk; 2) well-developed self-regulation, including volition, stress endurance, self-reflection, including *analytical-evaluating* and *systemic thinking*; *personality's*

flexibility (flexibility in thinking, emotional sphere, behaviour), the ability to make a decision; the responsibility for the made decisions and their consequences; 3) different competences, including professional competences and creativity as an ability, *oneself-(ego-*) and *environment-*(*eco-*) oriented *friendly thinking*, *attitude* and *behaviour*: observation of moral and ethical principles, the principles of environmental, including social environment (community), balance and sustainability, readiness for the co-operation with other people; 4) readiness to change oneself in order to maintain the balance with the changing environment, readiness to start changes in the environment on the basis of environment-friendly attitude and action (Katane, 2010; Katane, 2011; Katane, Kalniņa, 2010; Katane, Kristovska, Katana, 2013).

In order it would be possible to study and evaluate the competitiveness of research base enterprise employees, it was necessary to have ***research methodology***. For this purpose I.Katane, the author of the article, elaborated methodology for the evaluation of a specialist's competitiveness, which was grounded on the results of previously performed studies (Katane, 2010; Katane, 2011; Katane, Kalniņa, 2010) and which, in collaboration with G.Katana and I.Kristovska was approbated within the pilot research at one of the Latvian enterprises.

The system of indicators for the evaluation of specialists' competitiveness consists of 66 indicators. The methodology elaborated and applied for the research aim comprises not only the system of indicators for the evaluation of competitiveness, but also a questionnaire developed in conformity with it, as well as the methodology for the determination of a specialist's competitiveness levels and competitiveness coefficient. The elaborated research methodology of competitiveness enables to evaluate each specialist's competitiveness not only according to 66 criteria, but also to determine each specialist's competitiveness coefficient and competitiveness level according to the scale of levels from 0 to 9. (Table 1).

Table 1

Methodology for the Determination of the Common Level of Competitiveness

No.	Level of Competitiveness	Limits of Obtained Self-evaluation Points	Level of Competitiveness
1.	9	244 - 264	Very high level
2.	8	222 - 243	High level
3.	7	200 - 221	Relatively high level
4.	6	178 - 199	Level, which is a bit higher than the average level
5.	5	156 - 177	Average level
6.	4	134 - 155	Level, which is a bit lower than the average level
7.	3	111 - 133	Relatively low level
8.	2	89 - 110	Low level
9.	1	67 - 88	Very low level
10.	0	0 - 66	Critical level of competitiveness

At the research base enterprise, which is one of the international insurance agencies in Latvia, there are more than 700 employees employed. The enterprise has 59 branches in Latvia. It is one of the most significant employers of the insurance industry in Latvia. Since the research base enterprise is working on its growth and sustainable development on an ongoing basis, the enterprise management was truly interested in this study.

Results and Discussion

Evaluation of Specialists' Competitiveness at a Modern Insurance Enterprise

There were 18 specialists of division Y of X International insurance agency in Latvia involved in the research. The specialists self-evaluated their competitiveness. There were questionnaires given to the research respondents.

There were 66 indicators for the evaluation of competitiveness defined in the questionnaires. The respondents had to evaluate their competitiveness according to each of these indicators in the scale of 4 points. If a respondent fully agreed to the statement, he or she marked the statement with a tick, choosing answer "Yes" in the respective column of the table, which, according to the nominal scale, meant 4 points. If the respondent completely disagreed to the statement, he or she marked the statement with a tick in the column of "No", which in the data processing gave 1 point. Partial agreement to the statement in the nominal scale equalled to 3 points in the nominal scale, whereas partial disagreement – to 2 points. The maximum number of points, which could be obtained by a respondent, was 264 points (in total for the evaluation according to all 66 indicators). For each specialist employed at Y division, who participated in the research, there was determined not only the level of competitiveness, but also the coefficient of competitiveness by dividing the number of obtained points by the maximum number of points, which could be obtained (Table 2).

Table 2

Results of the Evaluation of Insurance X Enterprise Y Division Respondents' Competitiveness (N = 18; n=66; Σ_{max}=264)

No.	Respondents	Competitiveness Evaluation Amount (Σ)	Level of Competitiveness	Coefficient of Competitiveness
1.	**A**	209	7th level	0.79
2.	**B**	217	7th level	0.82
3.	**C**	209	7th level	0.79
4.	**D**	219	7th level	0.83
5.	**E**	218	7th level	0.83
6.	**F**	233	8th level	0.88
7.	**G**	223	8th level	0.84
8.	**H**	191	6th level	0.72
9.	**I**	227	8th level	0.85
10.	**J**	238	8th level	0.90
11.	**K**	204	7th level	0.77
12.	**L**	222	8th level	0.84
13.	**M**	216	7th level	0.81
14.	**N**	198	6th level	0.75
15.	**O**	215	7th level	0.81
16.	**P**	192	6th level	0.72
17.	**R**	199	6th level	0.75
18.	**S**	196	6th level	0.74

Irrespective of the fact that the coefficients of competitiveness determined as result of self-evaluation performed by respondents – specialists of research base enterprise Y division are relatively high, because they are close to "1", and the levels of specialists' competitiveness are within the range from level 6 to 8 (Table 2; Table 3), several indicators show that it is necessary to provide assistance.

Table 3

Proportion Indicators for the Levels of Respondents' Competitiveness in the Sample

(N = 18; n =9)

No.	Absolute Number of Respondents (N = 18)	Proportion of Respondents in the Sample (Σ =100%)	Levels of Respondents' Competitiveness (n = 9)
1.	5	28	6th level
2.	8	44	7th level
3.	5	28	8th level

Having analyzed and evaluated the obtained results according to the indicators, we drew a conclusion that the highest evaluation was given by respondents to their driver's skills and licence as an indicator

of competitiveness, because independent and fast moving from place to place by means of one's own vehicle ensures their mobility in the labour market, thus adapting to the fast pace of modern society's life, as well as providing a potential perspective to work at several work places, if necessary.

Alongside with the driver's skills and licence, the respondents have given high assessment to the following indicators of their competitiveness: ▪ a desire to improve oneself as a personality, including acquisition of new knowledge, to develop one's skills and abilities; ▪I have my own principles, which I try to observe, because they are the grounded on values in my life; ▪readiness to take upon responsibility for one's words and actions before oneself and others; ▪ other people's respect, who can achieve a lot in life; ▪ a desire that I would be respected by others, including colleagues and the management of enterprise; ▪ a desire and striving to achieve success in one's life, including one's profession; ▪ a desire and orientation towards the success in one's life; ▪ a desire to achieve success, to receive recognition and praise from others – this enhances self-confidence, creates positive emotions and inspire to start new activities; ▪ a specialist's professional competency; ▪ an ability to forecast the events of the nearest future and to model own behaviour according to the situation; ▪ the ability to develop own career successfully by achieving high results in any sphere; ▪ I'm nor envious and malevolent; I'm glad not only to for my success, but also for the success of others; ▪ readiness to overcome difficulty in order to achieve the planned.

The lowest evaluations were received concerning several indicators, which proves that the research participants need assistance regarding the following spheres of competitiveness: public speech and presentation skills; a psychologist shall assist in learning how to manage one's emotions, mood; achievement of planned aims (if it is impossible to achieve the set aims, perhaps, the specialists shall assist in adjusting aims and motivation spheres); flexibility of behaviour and conformity with the particular situation; forecasting skills in relation with critical thinking. Unfortunately, it is necessary to admit that: 1) respondents have relatively law self-confidence; 2) respondents do not see the opportunities to have professional growth at the research base enterprise, as well as they do not know how to realize it. Most of all the research participants are afraid of making mistakes. When establishing a system for the support and promotion of the development of competitiveness at the enterprise, it would be necessary to assist the specialists from the above mentioned fear through mutual cooperation.

Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise

On the basis of the results of theoretical research, as well as on the results of the evaluation of specialists' competitiveness at the research base enterprise (International Insurance Agency in Latvia) there was elaborated *Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterpris**e*** (Katana, 2012; Katane, 2014; Katane, Kristovska, Katana, 2013).

The aim of this conception is to *develop the specialists' competitiveness*, providing appropriate and friendly environment for the specialists' professional and career development. There are three functional spheres of *Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise* (Figure 1). We can see from Figure 1 that the functions of personnel management, career counselling and mentoring differ due to the specificity of each sphere, but they also mutually complement each other, showing that the functional segments of these spheres partially overlap.

The authors of the article have devised a detailed description of functions performed by each component of the system (Addition, Table 1).

Each support and promotion sphere is represented by a specialist, who is a member of a support team and whose responsibility is to perform many and different functions: a personnel manager, a career counsellor, a mentor. In this support system it is very important to cooperate with each specialist at the enterprise, but particularly with those, who need support regarding the development of competitiveness (Figure 2).

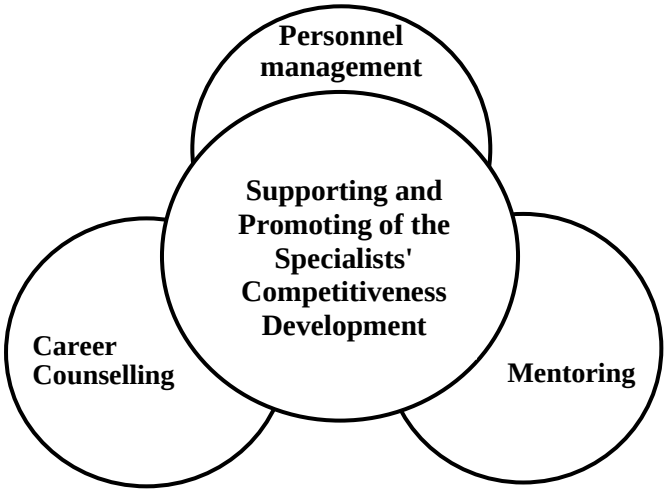

Figure 1. The Functional Spheres of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise (Authors' design).

The advantages of elaborated *Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise* are the following: 1) the conformity of conception with the aim of its development, namely, for the support and promotion of staff's competitiveness; 2) the relation of conception to the theory and practice of management; 3) transparency and comprehensibility of conception; 4) real and practical possibility to devise a system for the support of staff's competitiveness in an organisation and provide cooperation and team-work between specialists of different kinds and levels; 5) the universality of the system and its wide application at different kinds of organizations and enterprises (enterprises/institutions/different government agencies), the amount of personal management, career counselling and mentoring functions are sufficient, if they uncover the wide spectrum of functions in the support and promotion of staff's competitiveness; 6) the scope and sufficiency of personnel management functions included in the support and promotion system; 7) the scope and sufficiency of career counselling functions included in the support and promotion system; 8) the scope and sufficiency of mentoring functions included in the support and promotion system.

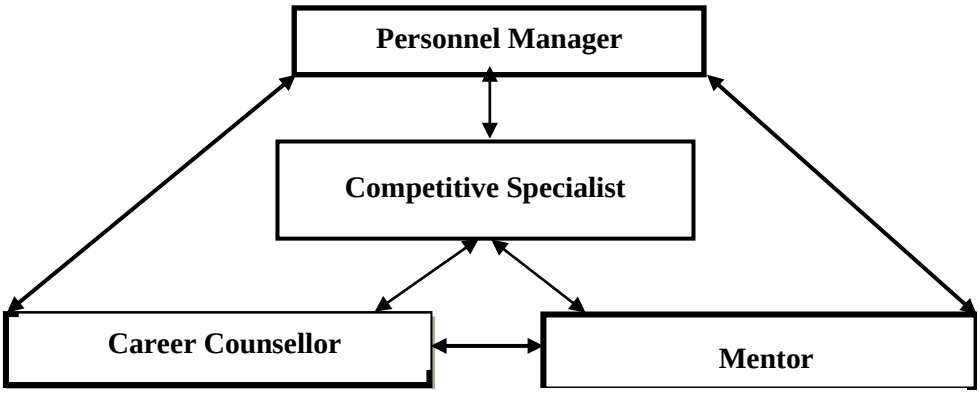

Figure 2. The Support and Cooperation System at a Modern Enterprise (Authors' design).

Conclusions

- The competitiveness of an enterprise to a great extent depends on the competitiveness of each employee as a specialist, therefore it is important to evaluate the specialists' competitiveness and promote its development at modern enterprises.
- The ecological and synergetic paradigms in social sciences, including education sciences,

enable to study a personality and/or an organization as a self-developing, self-organizing and self-evaluating system that functions in various spheres and learns to live, plan and forecast; constructs and accumulates its own experience; that is able to choose and to be responsible for the consequences of its own actions under the conditions of modern changes.

- C*ompetitiveness* is an integrative totality of an individual's qualities (qualities of a personalityand a specialist) that ensures its viability, including development and self-actualization, under the conditions of changing environment. *The basis for the personality's competitiveness is experience.*
- The methodology specially elaborated for the research aim and applied for the evaluation of specialists' competitiveness consists of three parts: 1) a system of 66 indicators for the evaluation of competitiveness; 2) a questionnaire; as well as 3) a method for the determination of the coefficient of competitiveness and the level of competitiveness. This methodology could be applied for the evaluation of specialists' competitiveness at any enterprise, and it enables to obtain valid and credible results.
- The obtained results show that the levels of research base enterprise employees' competitiveness are within the range of levels 6 to 8. But the range of the coefficient of competitiveness is from 0.72 to 0.9. This proves that the specialists employed at the research base insurance enterprise have relatively high self-evaluation level of their competitiveness. However, irrespective of the above mentioned, the methodology for the evaluation of competitiveness enabled to analyze and evaluate in detail the strengths or advantages and the weaknesses or disadvantages of the specialists employed at the enterprise, which identified the problems existing in the sphere of cooperation and mutual relations, as well as in the sphere of career development at the enterprise.
- On the basis of results obtained regarding the evaluation of specialists' competitiveness, it was concluded that it is necessary to elaborate and introduce *Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise*. There are three functional spheres of *Conception of Support and Promotion System for the Development of Specialists' Competitiveness at a Modern Enterprise*: 1) personnel management, 2) career counselling, and 3) mentoring. The functions of such spheres differ due to the specificity of each sphere, but also mutually complement each other, showing that the functional segments of these spheres partially overlap. It would be advisable to have a career counsellor and a mentor/mentors at each medium and large enterprise.

Bibliography

1. Achinstein B., Athanases S.R. (2006). *Mentors in the making*. New York: Tachers College Press.
2. Bloch D. P. (2004). *Spirituality, Complexity, and Career Counseling. Professional School Counseling.* USA, ASCA, pp. 343-350. [online] [06.09.2014]. Available at http://www.johnhawkinslpc.com/PDF/Spirituality/Career%20Counseling.pdf .
3. Caune J. (2005). *Konkurētspējīgās priekšrocības radīšanas, attīstīšanas un pārnešanas metodika Latvijas uzņēmumos* (*Methodology of creating, developing and transfering of competitive advantage in Latvian companies*). Promocijas darbs. Rīga: LU, 188 lpp. (in Latvian).
4. Daloz L. (1986). *Effective teaching and mentoring*. San Francisco: Jossey-Bass, 256 pp.
5. Dāvidsone, G. (2008). *Organizāciju efektivitātes modelis* (*Organizational Efficiency Model*). Rīga: SIA O.D.A. (in Latvian)
6. Floren G. L. (1998). *Marketable skills and attitudes.* USA, MiraCosta College, California. [online] [06.01.2015]. Available at: http://www.miracosta.edu/home/gfloren/market.htm#Careers.
7. Forands, I. (2004). *Personāla vadība* (*Personnel Management*). Rīga: Latvijas izglītības fonds, 189 lpp. (In Latvian)
8. Goodman J., Hoppin J. (2007). *Adult Career Counseling*: *New Clients, New Strategies* (ACAPCD-10). USA, Alexandria, VA: American Counseling Association. [online] [28.09.2014]. Available at http://counselingoutfitters.com/vistas/ACAPCD/ACAPCD-10.pdf .
9. Jūsela T., Lillia T., Rinne J. (2005). *Mentoringa daudzās sejas* (*Many Faces of Mentoring*). Rīga: SIA Lietišķās informācijas dienests, 196 lpp. (in Latvian)

10. Kačkere A., Odiņa I., Rieksta S. (2005). *Mentorings Eiropā. Latvijas perspektīva* (*Mentoring in Europe. Latvian perspective*). Rīga: LU. [online] [28.09.2014]. Available at: http://www.menttime.tsn.at/cms/upload/pdf/00_druk_mentors_latviski.pdf
11. Katana G. (2012). Personāla konkurētspējas attīstības atbalsts un veicināšana uzņēmumā (The Support and Promotion of the Staff's Competitiveness Development in the Enterprise). Rīga: EKA, 74 pp. (in Latvian)
12. Katane I. (2010). Competitiveness of Personality as a New Concept in Modern Education and Pedagogy Science. Proceedings of the 9th Interational scientific Conference *Engineering for Rural Development*, Vol. 9. Jelgava: LLU, pp. 327 – 334.
13. Katane I. (2011). Methodological Bases for Evaluation of Specialist Competitiveness. Proceedings of the 10th International Scientific Conference *Engineering for Rural Development*, Vol. 10. Jelgava: LLU, pp. 524 – 529.
14. Katane I. (2014). Evaluation of the Support and Promotion System Model for Development of the Staff's Competitiveness in Modern Enterprise as Learning Organization. In Proceedings of the 13th International Scientific Conference *Engineering for Rural Development*. Jelgava: LLU TF, pp. 529 - 534.
15. Katane I. (2007). *No ekoloģiskās paradigmas līdz vides modelim izglītības pētniecībā* (From Ecological Paradigm to Environmental Model in Research of Education). Sērija „*Izglītības ekoloģija*". Jelgava: LLU, 239 lpp. (in Latvian)
16. Katane I., Īriste S. (2013). Students' as Prospective Hospitality Specialists' Competitiveness in Theory and Practice. Proceedings of the International Scientific Conference S*ociety. Integration. Education*. Rēzekne: RA, pp. 119-129.
17. Katane I., Kalniņa I. (2010). Skolēnu personības konkurētspējas attīstība neformālās komercizglītības vidē (Development of Students' Personality Competitiveness within the Environment of Non-Formal Commercial Education). Jelgava: LLU, 331 lpp. (in Latvian)
18. Katane I., Kristovska I. (2012). Educational Environment of Schools for Sustainable Development of Rural Cultural Environment. *Journal of Management*, 2 (21), pp. 27 – 32.
19. Katane I., Kristovska I. Katana G. (2013). The Support and Promotion of the Staff Competitiveness Development in Modern Enterprise. *Management of Organizations: Systematic Research*, Issue 66, pp. 37-51.
20. Katane I., Laizāne A. (2012). Cross-School Mentoring as a Facilitator of Sustainable Development of Rural Schools in Latvia. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality*. Jelgava, Latvia, pp. 43 – 50.
21. Katane I., Penķe D. (2009). Gender accordance principle in career education in the context of ecological approach**.** Proceedings of the International Scientific Conference *Rural Environment. Education. Personality*. Jelgava, Latvia, pp. 305 - 316.
22. Konstantinova E. (2008). *Mentoring as Knowledge Transfer Process Promoting Enterprenourship in Rural Areas of Latvia*. Resume of the Ph.D. Paper for the scientific degree of Dr. oec. Jelgava: Latvia University of Agriculture. [online] [23.10.2014]. Available at http://llufb.llu.lv/dissertationsummary/management/Elina_Konstantinova_prom_d_kopsavilkums_2009_LLU_EF.pdf
23. Konstantinova E., Rivža B. (2007). *Mentoringa kustības rokasgrāmata* (*Handbook of Merntoring Movement*). Jelgava: Latvijas Lauksaimniecības universitāte, 112 lpp. (in Latvian)
24. Kristovska I. (2011). Activities of staff and its team-leader for upgrading the competences of distance learning adult students. *Journal of Management* [in Lithuanian - Vadyba], Vol.19 (2), pp. 7-13
25. Kuijpers M.A.C.T., Schyns B., Scheerens J. (2006). Career Competencies for Career Success. *The Career Development Quarterly*, 55, pp. 168 – 175. [online] [26.10.2014]. Available at http://www.utwente.nl/igs/tccr/tccr%20publicaties/kuijpers_schyns_scherens2006.pdf
26. Melvin B., Hale R., Foster M. (2014). The Importance and Challenge of Ability Assessment. Career Planning and Adult Development Journal, Vol. 29 (4), pp.98 - 114. [online] [12.08.2014]. Available at http://www.careernetwork.org/Journals/J-Vol-29-No-4-CD-pdf-Graduate-Student-Articles-Winter-2013-2014.pdf
27. Peters T., Waterman R. (2004). *In Search of Excellence: Lessons from America's Best-run Companies.* New York: Harper Business Essentials, 400 pp.
28. Андреев В.И. (2006). *Конкурентология* (*Concurrentology*). Казань: Центр инновационных технологий, 466 с. (In Russian)
29. Митина Л. М. (2003). *Психология развития конкурентоспособной личности* (*Developmental Psychology of the competitive personality*). Москва: МПСИ, 400 с. (in Russian).
30. Толочек В.А. (2005). *Современная психология труда* (*Modern Labor Psychology*). Москва: ПИТЕР, 479 pp. (In Russian)

Addition

Table 1

The functions of the system for the support and promotion of specialist's competitiveness

Career counselling functions in the enterprise	**Personnel management functions**	**Mentoring functions**
Information is provided about the situation in the labour market, the trends in the development of the labour market, the requirements of the labour market, opportunities for acquisition of education in Latvia and abroad	Devising and implementation of enterprise development strategy and/ or conception in the regional, national and international level	Creation and provision of optimal conditions for the exchange of experience in the enterprise
Information is provided about personnel management policy in the enterprise, the system of monitoring, control, assessment, promotion of staff professional performance and the system of remuneration in the enterprise	Planning of human resources, staff selection and recruitment	Integration of new specialists in the enterprise and promotion and fostering of successful professional performance
Provision of individual consultations about career advancement opportunities in the enterprise, motivation and encouraging	Administration of staff, record keeping	The support and strengthening of new specialists' motivation
Assistance in career planning-guidance, incl. promotion of lifelong career planning	Provision of information exchange, incl. both vertically (between the supervisor and the subordinates) and horizontally (between employees)	Encouraging new specialists to grow professionally, providing welfare, personality development and the quality of learning
Career counselling; individual and group counselling	Monitoring and control of staff performance in the enterprise	Support and promotion of lifelong education for enterprise staff in different age groups
Provision of career education in the enterprise	Assessment of professional performance	To plan, supervise and coordinate the process of education and further education, turning the enterprise into an organisation that is learning.
Organising of competition, election for a post and/or candidates for the post	Fostering of staff's professional development	Popularisation of the best work experience, incl. personal experience, in the enterprise
The creation of professional profiles for the staff in the enterprise and candidates for vacancies	Fostering and support for professional education and further education	Expansion of cooperation between enterprises (employers) and providers of education

Continuation of the table on the next page

Continuation of the table

Career counselling functions in the enterprise	**Personnel management functions**	**Mentoring functions**
Assessment of professional suitability	Development and implementation of remuneration system in the enterprise	Introduction of generation renewal traditions, their promotion, development and maintaining of cooperation culture
Organisation and monitoring of trial work	Implementation and control of rules set in the statutes of the enterprise	Provision of experience exchange between specialists of different age in order to provide professional development
Helping staff to acquire an ability of staying in the position	Regulation of mutual relationship among the staff within the limits of enterprise statutes	Protection and support for the monitored
Assessment of staff competitiveness and measures and support for its improvement	Provision of conditions in the enterprise that are necessary for professional performance, incl. care about safety at work, safe working environment in the enterprise	Initiation of different improvements and changes in the enterprise
Cooperation with psychologist in the enterprise or outside it, incl. organisation of psychologist's consultations for the staff	Provision of social care and health care for the staff	Maintaining and continuing of enterprise's culture traditions
Prevention of occupational burnout and provision of psychotherapy for those who are in need of it	Motivation, furthering of loyalty, promotion of positive attitude towards the work	Expanding of opportunities for staff's leisure time activities, involving into education of interest or non-formal education
Work on the improvement of career consultation methodology, approbation and implementation of new methods in the enterprise	Making staff feel stability	Openness towards dialogue and cooperation; provision of psychological and professional support to the monitored
Cooperation with the management of the enterprise, mentors of the enterprise and other specialists	Provision of gradual renewal of generations in the enterprise	Performing of mediator's functions in case of necessity between: 1) the employee and the monitored; 2) the monitored and colleagues
Development and coordination of a group for career support and provision of professional growth of enterprise staff.	To ensure the exchange of experience, involvement of enterprise staff into different projects, also international	Fostering of cooperation between different specialists in the enterprise

Role of Outdoor Education in Children Research Skills Development

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Abstract: Article is about children research and cognitive skills development in Riga pre-school education institution „*Madariņa*" where outdoor education is integrated in its curriculum. Outdoor education helps in children physical, mental, emotional, social and intellectual development. Close connection with nature also helps to benefit from nature and its beauty. The aim of study was theoretically and practically investigate role of outdoor education in development of children research activity in pre-school age (3- 7 years).The following problems were investigated in order to make conclusions for further development of outdoor education activities: children research skills development, methodology used by teachers in order to facilitate children research activity and their interest in research activity. Following research methods were used: observation of children play activity, parents' survey in order to make out parents attitude to children outdoor activity, learning in nature and evaluation of teacher's work in the development of children research activity and teachers' survey with the aim to investigate teachers' knowledge about research activities and used methods in outdoor education. Parents' survey results reflect that parents are very interested in children research activity development, but it also reflects that parents need additional information in this field. Teacher survey results shows that academic staff has good knowledge about children research activity and its role in their holistic development. Analysis of the results approves the fact that pre-school education institution „*Madariņa*" is progressing well in the implementation of outdoor education.

Key words: outdoor education, outdoor environment, research skills.

Introduction

Our society are getting more urbanized in the latest years – it's attention is more turned to visual media and verbal advertisements, IT technologies, but it is moving away from the nature, from nature as a place of action and education. K. Constable draws attention to the fact, that "children are losing touch with their natural environment and that they do not know about the impact humans are having on the area we live in" (Constable, 2015, 2). J. Ward indicates that children nowadays are in a hurry, they are busy with their electronic devices and they have too many distractions (Ward, 2008).

More and more our ways of learning are getting too theoretical and they are oriented to the acquiring of text, think B. Molander in book "Outdoor Education" written by L. U. Dahlgren and A. Sczepanski (Dālgrēns, Ščepanskis, 1997). S. Amonasvili (Amonašvili, 1988) indicates, that with a mind child can only understand and acquire knowledge, but if he or she uses hands – on approach – the knowledge gets alive, but if the studying is done by heart, then the knowledge will be positive transformation.

People of our century have forgotten to get a pleasure from nature and its beauty in all seasons. The main problem is that we are reserved in discovering process of beauty and joy of being in nature to our children and that is why their emotional development is suffering. Nature can offer us many answers to our questions, it is necessary to explore them. There are changes for a whole year running in nature. Children development in natural environment is observed in all areas: physical, mental, emotional, social and intellectual. R. Louv (Louv, 2008) in his exciting book "*Last Child in the Woods*: *Saving Our Children From Nature – Deficit Disorder*" about children interaction with nature writes: "*Nature inspires creativity in a child by demanding visualization and the full use of the senses. Given a chance, a child will bring the confusion of the world to the woods, wash it in the creek, turn it over to see what lives on the unseen side of that confusion.*".

Nature facilitates children will to understand environment, to make wonder about it and develops his/her mental growth. It is very important to use effectively this diversity in children sensor, intellectual and emotional development. Children explore environment in cognitive process. In order to stimulate their cognitive development it is necessary to act practically in outdoor environment.

The aim of article – theoretically and practically investigate role of outdoor education in development of children research activity in pre-school age (3 - 7 years).

Methodology

Activities in outdoor environment facilitate children holistic development. For our research the definition of outdoor education is important. P. Ford has formulate definition of outdoor education: „ The concept of outdoor education indicates venue of learning environment (any outdoor environment), topic of learning (natural and cultural aspects of certain environment) and aim of classes (to get knowledge, skills and form understanding about local environment)" (cited in Dālgrēns, Ščepanskis,1997, 27).

Outdoor environment is important study aid, which helps to achieve aims of educational program. Children practise to understand and analyse different activities, phenomenon and processes in nature with practical methods. Outdoor education includes qualities, which doesn't have for indoor environment. It offers possibility to join thinking, theoretical knowledge and empirical knowledge. Children skills to investigate are developed indirectly, they become explorers. It is very important that children get information not only about nature, environmental problems and outdoor life, but also are doing investigations outdoors. It makes children learning more authentic and more meaningful. Outdoor classrooms and outdoor learning are focused to the use of nature as teaching resource. "…landscapes can serve the needs of the child to play in natural areas among the plants and in the soil, to play creatively and safely, developing through their own resources, their own environmental awareness" (Millington, Nuttal, 2013, 9).

Professor D. Lieģeniece (Lieģeniece, 1999) points, that J. A. Comenius in his theory indicates holistic approach – it is necessary to organize educational process by development of children intellect, morale, hands movement and emotions, will and physical condition. It is very important, that children not only can listen about nature, environmental problems and outdoor life, but also can explore outdoor environment, which makes learning more meaningful. It is possible to do interesting experiments and investigations about air, soil and water, also explore living creatures. This is good way to stimulate children to be active, for example, to make fireplace, to form flower-beds and vegetable garden, to care for apple-garden. These activities offer many possibilities to direct children communication and socialization in outdoor environment.

Research has been done in Riga pre-school education institution „*Madariņa*". Research participants were 12 pre-school teachers and speech therapist, 134 children of pre-school age (3-7 years old) and their 60 parents.

Research reflects the situation of outdoor education implementation in Riga pre-school education institution „*Madariņa*". The following problems were investigated in order to make conclusions for further development of outdoor education activities:

- children research skills development;
- methodology used by teachers in order to facilitate children research activity;
- children interest in research activity.

Following research methods were used:

- observation of children practical activity in nature;
- parents' survey in order to make out parents attitude to children outdoor activity, learning in nature and evaluation of teacher's work in the development of children research activity;
- teachers' survey with the aim to investigate teachers knowledge about children research activities and used methods in outdoor education.

Results and discussion

The first step in study was to investigate children research skills. A child and his/her needs are the main in pedagogical process. Child's needs facilitate child's development. By respecting child's needs we can influence his/her successful life development.

Observation of children practical activity in nature shows, that 50 % of children can find interesting objects to explore outdoors. They can organize themselves for research activity, because they have well developed skills and knowledge about that. Teacher's role is very important in facilitation of children's research activity. It should be planned in their everyday activities because research activity stimulates curiosity, attention development, and skills to notice causal relationships and make conclusions.

The aim of parents' survey was to get to know their thoughts about children activities in outdoor environment and educational process in pre-school. Their opinion is very relevant, because it helps for teachers to plan their pedagogical work and also cooperation with parents.

Survey results shows that parents from Riga pre-school education institution „*Madariņa*" understand the influence of research activity in nature. It is evident that parents encourage children outdoor activities and that is one of the reasons why they have chosen pre-school education institution with outdoor education activities integrated in the curriculum. Parents not only encourage these activities, but they (33 %) also take active participation in outdoor activities of pre-school education institution „*Madariņa*". 50 % of parents use to participate seldom, but 17 % do not participate at all (Figure 1).

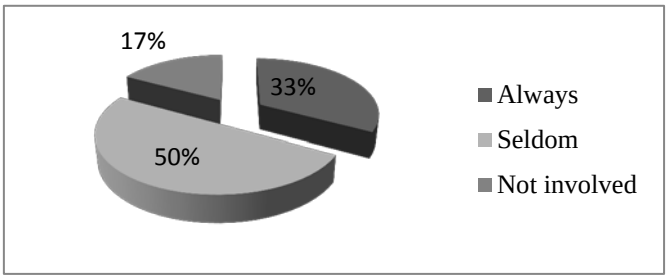

Figure 1.Parents participation in pre-school outdoor activities.

There are some outdoor activities which is a tradition in pre-school education institution „*Madariņa*". Children together with parents plant flowers in spring, at graduation party families plant trees, shrubs and other plants. Outdoor education also includes physical exercises which are realized in „ Family day" activities.

Successful educational process very much depends of teachers' attitude and knowledge. Teacher helps children to explore outdoor life by explaining and raising interest about different phenomenon in nature. Well-developed research skills help children better solve different problems in their everyday life, because they can find solution to different problems by themselves.

Outdoor environment always offer changes which can be defined by observation. This is one of the best ways to develop children observational and cognitive skills. Activities which are used indoors can also be used outdoors. Then they make stronger influence on children senses and this is very effective way of learning. Being outdoors is also positive emotional experience which stimulates children cognition and willingness to explore nature more and more. By exploring children make their own discoveries about natural phenomena and this is a way to get new knowledge for the whole life.

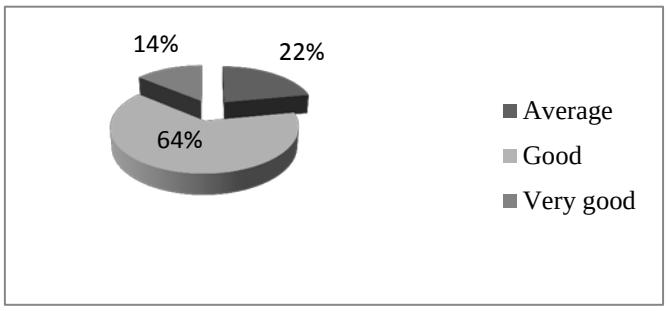

Figure 2. Teachers theoretical knowledge about research activities.

Data reflects (Figure 2), that 64 % teachers from pre-school education institution „*Madariņa*" have good knowledge about research activity and its role in children development. 22 % of teachers think that their knowledge is average and should be improved, but 14 % evaluate their knowledge as very

good. None of pedagogical staff members evaluate their knowledge as week. It means that children can get good support in doing research work outdoors in pre-school education institution.
Teachers are very interested by doing outdoor activities as institution has really excellent infrastructure for that. There is a fire place, very large apple – garden, vegetable garden, well planned flowerbeds, which are blooming from early spring until late autumn. Children have excellent possibilities for different sport activities, because institution has very wide play-ground and also small stage for cultural activities. There are also parks and Botanical garden outside the territory where children use to go to do different outdoor activities. Institution is in Riga, not very far from the city centre and serves as excellent place for city children to be in environment which is nature friendly and also with very professional staff which is very interested to use all outdoor elements in order to facilitate children holistic development.

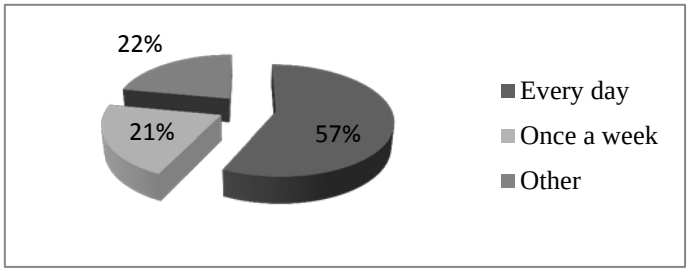

Figure 3. Use of theoretical knowledge in pedagogical process.

57 % of teachers use their knowledge about research activities every day (Figure 3), 22 % use their knowledge once a week, but 21 % of pedagogical staff members use them periodically according to the season, children needs and thematic planning. It is evident that teachers in pre-school education institution „ Madariņa" have good knowledge in children research skills development.

The most popular method teachers use in outdoor education (Figure 4) is long – term observation – 27 % of all methods used in pedagogical process in pre-school. Teachers also use short – term observation (19 %), practical method and discussion - 15 %. Experiments (10 %), visual method (8 %), excursions (4%) and demonstration (2%) are less popular methods in pre-school in outdoor education.It can be concluded, that teachers use large variety of methods and it helps better to explore nature and also stimulates children research activity.

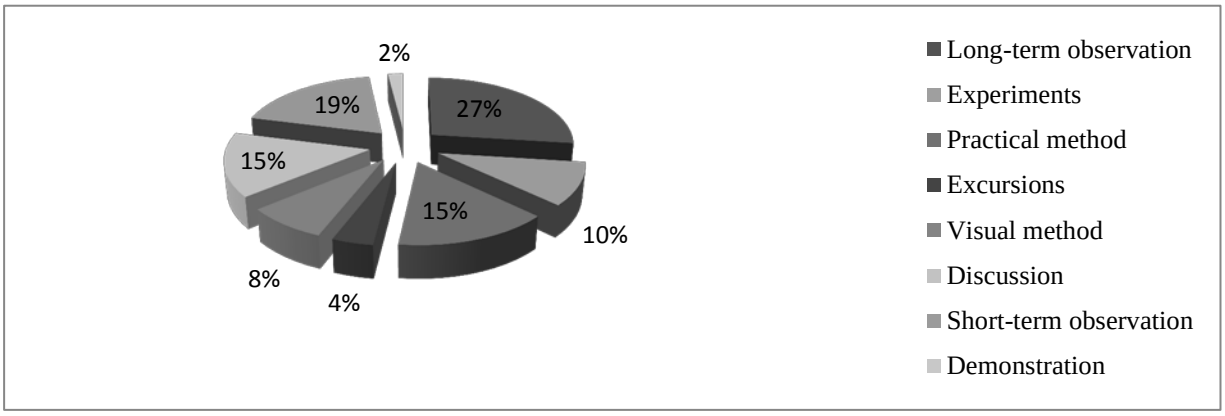

Figure 4. Methods used by teachers in outdoor education.

Children learn to understand and analyse events and processes in nature by using methods mentioned above. Outdoor education has many advantages in comparison with education indoors. Children can develop their research skills in nature indirectly, because they are interested to explore the world. It is very important that children not only are listening stories about nature, environmental problems and life outdoors, but also explore nature. It makes their learning meaningful. Outdoor education helps children to find answers to many questions, only it is necessary to find them by exploring the nature together with professional teachers and encouraging parents which can be the best facilitators in this exciting learning process where children simultaneously can develop their physical, mental, emotional, social and intellectual areas.

Conclusions

- Parents' survey results reflect that parents are very interested in children research activity development, but it also means that parents need additional information in this field. Parents encourage children activities outdoors because they are very necessary to their health and holistic development, but parents also would be interested to get more information about outdoor education. Survey results also reflect the fact that majority of parents are active in cooperation with teachers but there are some parents which are resistant. That is why it would be necessary to find the reason why they are so reserved. Still they think that activities offered in pre-school education institution „*Madariņa*" are very positive for children development.
- Teacher survey results reflects that academic staff has good knowledge about children research activity and its role in their holistic development – teacher consider children needs and knowledge, they elaborate curriculum, methods and teaching aids in accordance with children development.
- More than a half of all pedagogical staff members use methods for children research skills development in everyday activities. The most popular pedagogical method is observations, but excursions and demonstrations are used not so often. It would be necessary to include excursions and demonstrations in the curriculum of pre-school institution in order to facilitate children holistic development.
- Analysis of the results reflects the fact that Riga pre-school education institution „*Madariņa*" is progressing well in the implementation of outdoor education. It is necessary in pedagogical work to continue to develop children independent research skills, to notice causal relationships and make conclusions by gaining new experience and knowledge.

Bibliography

1. Amonašvili A. (1988). *Kā klājas bērni?* (How are you children?) Zvaigzne, Rīga, Latvia, 172 lpp.(in Latvian)
2. Constable K. (2015). *The Outdoor Classroom in Practice, Ages 3-7.* Routledge, New York, USA, p. 148
3. Dālgrēns L.Ū., Ščepanskis A. (1997). *Brīvdabas pedagoģija* (Outdoor Education). Linšēpingas Universitātes Brīvdabas un vides pedagoģijas centrs, Latvia, 64 lpp.(in Latvian)
4. Lieģeniece D. (1999). *Kopveseluma pieeja audzināšanā* (Holistic approach in upbringing). Rīga, RaKa, Latvia, 262 lpp.(in Latvian)
5. Louv R. (2008). Last Child in the Woods: Saving Our Children From Nature – Deficit Disorder. Algonquin Books, Chapel Hill, USA, p. 412.
6. Millington J., Nuttal C. (2013). *Outdoor Classrooms: A Handbook for School Gardens.*Permanent Publications, Hampshire, UK, p. 176.
7. Ward J.(2008). I Love Dirt ! 52 Activities to help you and Your Kids Discover the Wonders of Nature. Roost Books, Boston, USA, p. 144.

Pre-school Age Child Treatment and Awareness about Conservancy of Nature

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Abstract: The development of modern science and technology has completely changed the environment and public and interpersonal relationships. Natural resources are used more intensively than ever before. Human impact on nature has reached global dimensions. This means that in the future much more attention should be paid to the rational use of natural resources and it is encouraged already during the pre-school aged child's development to raise their understanding and attitude towards nature conservation. Children are open to and interested in exploring nature, learning about our national traditions and folklore heritage on the conservancy of nature and work ethics with the guidance of skilled teachers and parents. The aim of the study is to get theoretical and practical knowledge about promotion of treatment and understanding of nature conservancy by pre-school age children. Research is based on the analysis of theoretical literature and the empirical method – observation of 46 children of mixed ages (4-7 years) during the pedagogical process in Riga pre – school education establishment. During the survey on the environmental education and development of responsible attitudes of children carried out by 42 educators, the well and less well known topics were found out. We believe that raising awareness and attitude of pre-school aged children is of great importance for the public.

Keywords: pre-schooler, education, environment, ecology.

Introduction

The nature around us is our home, which we use from the first days of our life. It is exactly because of this that we need to take responsibility for how we leave it for the next generations to inherit. It is the basis for our and our children's quality of life. We can preserve, protect and improve it, or we can recklessly change it while thinking of short-term consumerist gains. We often take nature for granted and fail to appreciate it while producing and consuming ever more, but natural resources are not infinite. How does one foster healthy habits and true understanding about the preservation of nature and conservative behaviours from an early age? What resources can be used in pre-school to purposefully teach about nature? How to improve pre-school teachers' skills towards fulfilling eco-school projects in cooperation with parents and public organizations? The urgency of the matter is determined by the need to develop skills, responsibility and competence of action for sustainable development at an early age.

A. Spona (Špona, 2006) believes that childhood impressions, habits and self-regulation are often the factors that determine an adult's style of behaviour. It is formed through:

- perception of social reality,
- personal understanding,
- emotional trials.

Behaviour is the expression of attitude through action. Positive behavioural habits formed in childhood, enhanced through experience, are preserved as values in one's life (Špona, 2006, 84).

A group of authors from several countries around the Baltic sea have carried out the project „*Education for change*" (Iglītība pārmaiņām…, 2004). Project's authors believe that ecological sustainability means society needs to realize that the basis of its existence is tightly linked to the survival and wellbeing of other species and natural processes in their habitat. Knowledge in Ecology broadens the understanding of morality of actions, adds insight into interdependence of seemingly independent natural processes, and highlights our duty to reckon with all living things. Understanding the model of a unified ecosystem is at the basis of Ecological sustainability: all of Earth's ecosystems are interdependent, protectable and maintainable. The Earth is viewed as a self-regulating system, which denies the importance of any of its constituents over any other because they are all vital.

When fulfilling principles of a sustainable development in practice it is necessary to promote, facilitate and develop our society's environmental consciousness, civil participation, and an environment-friendly lifestyle (Izglītība pārmaiņām..., 2004, 12).

The aim of the study is to get theoretical and practical knowledge about promotion of treatment and understanding of nature conservancy by a pre-school age child.

Research hypothesis: Pre-school aged children's behaviour related to and understanding of nature preservation carries out better if during the pedagogical process children are ensured active participation in conduction of projects and are introduced to inherited folk tradition and folklore about the preservation of nature and virtue of work.

Methodology

Research is based on an analysis of theoretical literature and the empirical method – observation of 46 children of mixed age (4-7 years) during the pedagogical process. The study was conducted in Riga pre – school education establishment X during years 2012-2014. During the survey on environmental education and development of children's responsible attitudes carried out by 42 educators, the well- and less-known topics were explored.

Results and discussion

Necessity for environmental education is dictated by changes in the global socioeconomic development. These changes are manifested as intensification of nature degradation processes. Nature is threatened firstly by people's lack of knowledge and environmental education, and secondly by egoism. It is exactly environmental education that could replace this lack of knowledge with knowledge and change attitude towards the environment (Stola, 2001, 14).

L. Priede points out that problems of ecological nature are not just problems of our country but the entire world. She believes that the creation of an ecological culture is already important at pre-school age, because that is when a person's perceptions of good and evil, beautiful and ugly are formed; the person also begins to grasp life's uniqueness (Priede, 2007, 43).

Thanks to environmental education each person can acknowledge the impact of his/her actions on the state of the environment (environmental quality), can understand the essence of sustainable development and try to ensure it. Environmental education usually offers various activities – projects, events, excursions, games and plays. Gradually children's and adults' understanding of conservation of natural resources is enhanced. In turn to preserve natural resources one needs to think about choice of action.

Authors of the project „*Education for change*" (Iglītība pārmaiņām…, 2004) explain that Ecology is also a natural science which encompasses knowledge about the different life forms that inhabit our planet and their interrelations with each other and the ecosystems around them e.g. plant-life ⇔ soil ⇔ freshwater ⇔ etc. Both environmental education and sustainable development education hold great potential. Environmental education includes raising awareness and gaining new perspectives, values, knowledge and skills; this is both a formal and informal process, which includes changing the general attitude towards more support for an ecologically sustainable environment (Izglītība pārmaiņām..., 2004, 12).

L. Priede (Priede, 2007) believes that ecological culture is made of three interlinked components (Figure 1).

The values of life and how nature is perceived are developed in early childhood years. Unfortunately today a lot of children grow up disconnected from nature. Therefore you would not expect the child to care about nature and use his/her skills to study and save nature. As if it would happen without any effort, on its own or that the teachers will most likely promote this. Experience shows that in schools children make observations indirectly, mainly through the means of images or video recordings, which doesn't encourage developing skills, customs or empathy. In more developed countries such as Scandinavia they have a practice called outdoor education.

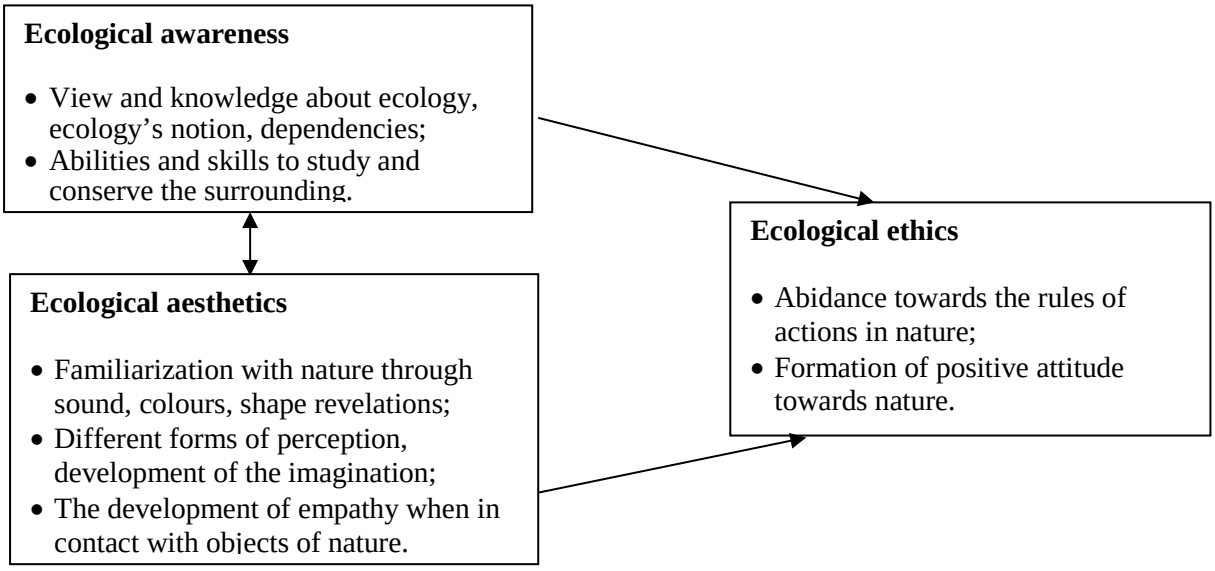

Figure 1. Ecological culture according to L.Priede (Priede, 2007).

The outdoor pedagogic and educational perpective is embedded in the hearts of Norwegian people and their folklore, but it is still not profoundly rooted in the public Nordic education system. The Nordic traditions of outdoor recreation and outdoor methodology are, however, firmly rooted and alive in the Norwegian folk high – school movement. Similar in Sweden in the recreational leader training at folk high – school level. Based on our experience as teacher trainers and researchers, we believe that physical reality should be the basis for learning to a much greater extent. In this perspective, beside the written cultural heritage, thematic activities in the tracks of nature's forces and Man's activities in the landscape become important learning exercises: woods, meadows, lakes and streams, crofter's holdings and ruined cottages, stone walls, and historic and present uses of land (Dahlgren, Szczepanski, 2008, 24).

Riga Teacher Training and Educational Management Academy collaboration project's *„The sun"* (Brīvdabas pedagoģijas..., 2014) partner is the Centre for Outdoor Environmental Education at Linköping University which is represented by Anders Szczepanski. The first two project parts took place in Vidzeme (a region of Latvia), where the organizing and ideas were carried out actively by Riga Teacher Training and Educational Management Academy Cesis branch superior M. Raudziņa. The third part was conducted so that the outdoor education ideas would be spread wider throughout the Latvian pedagogical circle. Outdoor education was studied through joining theory with praxis. An integrated approach towards advancing child development was implemented; physical and mental games as well as stress reduction techniques were acquainted with. Immensely important and interesting were the practical studies as well as the discussions and group work which involved questions about nature. A. Szczepanski (Dahlgren, Szczepanski, 2008, 24) photography collections about the experience in Sweden convinced and encouraged to use the outdoor education ideas. Pedagogues improved their understanding about how they should conduct interactions with children – focussing more on a child's perceptional and emotional experience and the motivation to participate

Latvian pedagogues' enthusiasm to participate in the project was noticeable, because further-educational courses were attended by more than sixty pedagogues from twelve of Riga's pre-school education establishments along with two regional institutions from Riga and Cesis as well as three of Jelgava city's pre-school educational establishments. The Project included two schools and three higher education institutes – Latvian Academy of Sport Education, University of Latvia, Riga Teacher Training and Educational Management Academy.

It is very important for every project participant to evaluate and search for their own revelations which they have gained through solving a specific pedagogical situation, which is why at the end of the project an inquiry and a discussion was made about the following questions.

- How did the offered organized activities help me understand the idea of outdoor education teaching?
- What are the initiatives which I gained that I can use in my daily work?
- Will these ideas will be difficult to implement in my daily work?

Answering these questions 81% or 34 teachers from 42 respondents thought that a child's activities need to be coordinated with the parents' permissions, however unfortunately they have differing opinions on the need for outdoor education. A problematical aspect is also mentioned – the attitude of the teachers, even to the point of idleness and incomprehension.

On the other hand, whilst studying opinions about the course process and topicality of the pedagogical idea it was discovered that 74% or 31 pedagogues considered that there is a clearly visible interconnection between nature and pedagogy. The attitudes of Latvian ancestors towards nature are well known from folklore materials. The pedagogues also showed approval towards movement games and agreed with the necessity to use practical project operating techniques for both pre-school children and an audience of grownups. Participants of further education courses willingly shared their thoughts and feelings: "*Fantastic that the activities happened not indoors but out in an open nature environment, it was so pleasant to feel the wind, rays of the sun and the smell of the grass. In Ebelmuizas park territory there is safety feeling, while running. Also falling over won't produce any worries about traumas.*"

Another course participant's opinion, which expresses the need for implementing pen-air pedagogies: "I was convinced that more time needs to be spent outside. Not only during strolls, but also different activities need to be organized in the fresh air outside like speech development and mathematics. Truly many new ideas, interesting games."

Affective experiences are undervalued in our urban and artificial society. Who cares about an environment he is not bound to? Outdoor education as an alternative pedagogy and method gives us an opportunity to establish a kind of silent knowledge, a sensory experience where words are not enough. In school, learning is based mainly on texts (literary learning), and increasingly seldom on firsthand experiences. It is a methodological problem that we would like to solve with outdoor education. The fundamental idea is to create opportunities for concrete experiences in the outdoor classroom (Dahlgren, Szczepanski, 2008, 25).

From the Latvian doctors' society's 12 recommendations for a living healthy, wellbeing and a qualitative life we can see that it implies on three fairly important rules.

- Maintain the earth, don't pollute it! We don't own any other planets!
- Study – education signifies skills and abilities for staying healthy and living a long life!
- Get up, move and live! Climb the stairs, don't use an elevator! Run, swim or ride a bicycle for at least half an hour five times a week! Take part in sports at any age, compete! (Apiņa, Mozga, 2014)

Children at pre-school age develop attitudes and habits that stick with them for their entire lives, which is why it is important to involve children in meaningful and active labour within nature, to strengthen their health and to gain a well informed insight into the conservation of natural resources. If the parents and pedagogues confidently lead by example with their actions and attitudes in everyday life then the offspring is also motivated to repeat the seen experience and will gladly join in with their elders.

To encourage the development of a healthy lifestyle, habits and understanding of physical, emotional and mental growth correlations within a community, J. Hibber and J. Usmar (Hibberd, Usmar, 2014, 81) suggests to:

- take care of your body, feeling better physically will make you feel better mentally;
- incorporate exercise into your life: start a new class or modify habits to become more active;
- physical relaxation is an essential part of a healthy life – so schedule it in!

They have developed images depicting correlation between physical and emotional growth. There are strong links between how you feel emotionally and how you feel physically (Hibberd, Usmar, 2014, 76) (Figure 2).

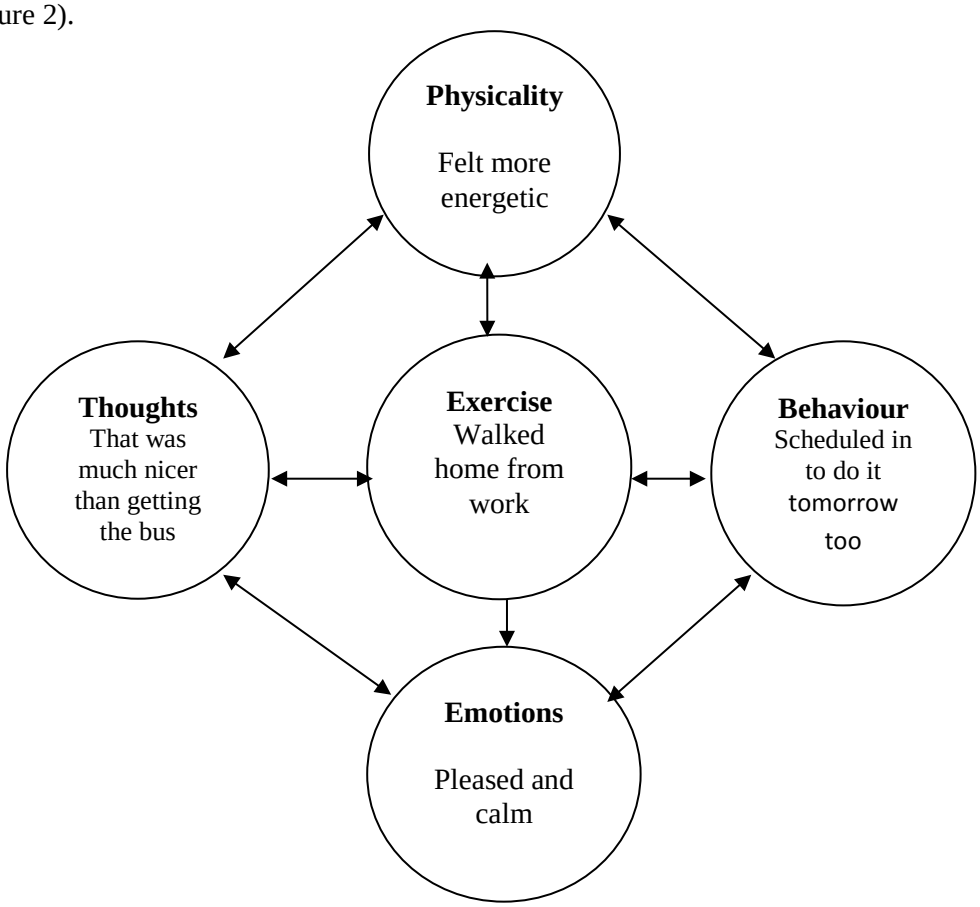

Figure 2. The physical mind map according to J. Hibber, J. Usmar (Hibberd, Usmar, 2014).

A. Pipere (Pipere, 2005, 7) explains that the roots of humans' perception of health might lie in the wisdoms of the elders and the folklore about diseases, their treatment and prevention. This knowledge might be a part of the cultural legacy which is passed on generation to generation.

I am convinced that the Latvian national legacy might be an important condition for a successful ecological attitude promotion, because the national Latvian song beauty is created even from roadside leafs or stems of grass, from the everyday work full of worries, from the bird-cherry blossoms or the whiteness of an apple orchard. Latvian national songs aren't imaginable without the concept of beauty and fairness. Flowers, meadows, songs of the birds, everything is in a green gorgeous dress of life.

Folk songs are a testimony for the huge observation skill that the Latvian people have along with the surrounding world and the understanding of our own deep feelings. Latvians have a large collection of folk songs about the woods, meadows, birds and animals. They mirror the love for our native land, equally shown are also the natural phenomenon contributions to the observation, deduction skills and development of imagination. A particular peculiarity and lifelines is gained even from lifeless part of nature (sun, moon, stars), while plants and animals are fully incorporated into the lifestyle and passage of humans. Folk songs' in-depth cognition is expressed about everything around us. It invokes to see an object not only from the businesslike perspective, but also to find the good and beautiful, worthy of admiration and imitation.

Riga preschool educational establishment X since 2012 has been a part of the Environmental education supported fund for the Ecoschool project. In the first year, evaluating the accomplished, Eco council noted that more attention was devoted to the development of the immediate surroundings, new plant bed implementation, different fruit-tree and vegetable cultivation, as well as tree and decorative shrub planting. Preschool education establishments in 2013 started work on juice box and milk carton gathering campaign *„Sort the packages!"* (Sulu un piena..., 2013) and continues with a promo "Hand

in waste paper for a repeated recycling!" and used battery gathering. Children are summoned to make posters about economizing natural resources and to mimic appeals to tidy up our surrounding. In this way, children are being accustomed to be responsible and thoughtful. This happens in a meaningful pedagogical situation so that the kids could successfully acquire both reading and writing skills and to cultivate the concept of conserving nature. Preschool teachers together with the children made posters – circular activity diagram "*Recycling of waste*". This way kids refine their understanding of the sorting of product packaging. The preschool environment is supplemented with self-made toy, were the sorted item names are written on game cards. The kids while participating in the game will have to read and analyse the situation.

As a gratitude for the support of teachers: Olita Kalēja, Agnese Kolmane, Linda Šikmkus, Edīte Borska – Ivanovska, Baiba Gribkova, Jana Stalgēviča, Ineta Mārtinsone, Ieva Vīksne, Ilona Spole, Guna Andrejeva, Ilze Lutkovska, Silva Jakobsone, Maira Sudraba, Māra Blāķe, Aija Strazde un Dzintra Kažemaka in the assisting of making the game materials and posters - the preschool educational establishment has received the paper of recognition and gratifying words for taking care of the surrounding environment and handing in waste paper for recycling from Līgatne Paper factory (Papīrfabrika Līgatne, 2015). The development of the immediate surrounding was carried out creating the first Ziepniekkalns barefooted trail. Both the parents and the children took part in the trail's creation. Kids were the first experts, who tried out the created trail's offered possibilities. Together with the trail, multiple self-made birds' nests were put up in the surrounding area of the establishment.

During the survey on environmental education and development of responsible attitudes among children carried out by 42 educators, the well- and less-known topics were explored. It turned out that during the games, strolls, and excursions, more attention is focused on the subject – a healthy lifestyle. While introduction of the subject of maintaining a clean environment and sorting refuse proved their importance mainly by allowing the child to perform practical activities which are also socially important. Less popular are the subjects of climate change and energy saving, as at pre-school age such kind of general information is difficult to understand. It turns out that children are excited by the topics on the importance of forest and water. These topics are preliminary planned by the pre-school educators and realised in targeted collaboration with the children.

The majority – 86% or 36 pedagogues from a total of 42 respondents have admitted that children's understanding in environmental education is best fulfilled using practical actions, demonstrations, experiments and purposefully organized observations. All pedagogues are unanimous that the most important method in preschool is playing games. Whilst playing a child strengthens and enhances the acquired views on any topic of environment education, strengthens skills, expresses personal attitude towards the essence of matter, traditions and habits.

The theme of a healthy lifestyle was made topical in 2014 in cooperation with the society *„Latvian Cyclists' Association"* (Latvijas Riteņbraucēju apvienība, 2015) and parents. So families were invited to take their child to the pre-school on a bike. In terms of improving the pre-school environment different solutions were sought for bike parking as well as for safe riding.

We can state that from a parents' perspective the most support went to the campaign organized by Environmental Education Fund's and Eco-school Program called *„Healthily eaten!"* (Solis pretī..., 2013). In Riga pre-school establishment X it was rendered through the action day *„Let us prepare healthly food from Latvian fruit, vegetables and be healthy!*". Five and six year old children as well as the very young ones took part in this activity of exploring and preparing healthy food. Patient completion of the begun work, setting the table, and polite behaviour were thought of. Besides those the event was dominated by creating understanding about products important for health – gifts of the Latvian autumn. Children's self-made cookbooks, food recipes as well as interest to get acquainted with journals publishing food recipes contributed towards improving reading and writing skills.

We are certain that in order to enrich pre-school aged children's social experience it is important to organize events which develop both topics of work ethic and ecological attitude development. Because of this during folklore events *„I walked through a silver grove and did not break a branch", „Where are you driving small birds?"* children evaluate various peoples' attitudes towards nature through

singing, dancing, playing games, and telling folk tales. To provide information on the event children prepared a poster and wrote the event program.

Getting to know and preservation of the nature surroundings is important, especially in city pre-school establishments. Children in a city environment often grow up distanced from nature, without understanding its value or participating in planting of trees. City kids much more often see cars and workers making roads or new builds, but less frequently situations where someone is taking care of flowerbeds or planting plants.

Due to this the parent's duty to introduce a child to nature, lead a child into the green flowering, or snow-white nature, where a child would experience the beautiful and irreproducible closely. So it is important to secure children an opportunity to get acquainted with various natural objects, perceive them through heart and mind so as to love them for the rest of their lives.

If a grown-up does not feel the nature's healing influence, is indifferent to the environment he/she lives in, and does not try to look into it, does not notice the beautiful around himself/herself, in the nature, then the child loses a lot, does not feel himself/herself as a part of nature, grows up indifferent towards it. In such a situation the child perceives nature's beauty with difficulty, because he/she is not encouraged to turn to it. He/she has not developed the ability to perceive, feel and understand to evaluate nature's uniqueness. Unfortunately this can reflect in a child's future development and his/her attitude towards the surroundings.

So it is very important for a child's development to have a considerate and understanding parent, who can himself/herself perceive, feel and discover the world of nature. Adults need to encourage children to see beauty in nature, their vicinity, and to also create beautiful hand work. The parent's tone of voice and attitude towards the given action or thing is important, because the child is trying to determine if they parent's feelings are genuine in every situation. Only with affectionate manner can children be encouraged to be open and enjoy the beautiful. As a result children feel understood and equal partners not only among peers, but also together with grownups.

S. Nikolaeva (Николаева, 2000, 5) points out that already at pre-school age an important aspect of children's ecological upbringing is creating an understanding how living creatures are principally different from inanimate objects. Another aspect is creating skills of taking care of plants and animals, a child's participation in ensuring the conditions required for life and growing. She believes that if children are not given an opportunity to take care of potted plants, water the flowerbed and trees during the summer heat, if the child does not participate in caring for the aquarium or the Guinea pig cage and animal feeding, then initial ecological understanding of nature does not form.

Pre-school aged children's attitude towards and understanding of nature preservation was understood through observation of their practical activities in nature project events, as well as daily animal care activities. Criteria for the observation were determination of action, independent and appropriate choice of tools, ability to evaluate the accomplished, keenness to find information, questions asked and answered.

Pre-school education teacher Sintija Teicana has summarized children's phrases and talks about observations in nature. We will give some examples, for instance, early in the morning whilst standing at the window a 5 year old girl A is talking to a 4 year old boy R:

A: „When we come to the kindergarten it is night, and when we leave the kindergarten it is night again. It must be Winter!"

R.: „Well, yes!"

It is possible that previous conversations with adults have affected children's understanding of natural processes.

Another conversation between 4 year old boys T and K. They are walking in the yard and interested about the life of worms living in the soil:

T.: „Did you find one?"

K.: „No. The worms have gone to sleep their big sleep, so all have disappeared."

Children are interested both by living things and materials in nature, they can be acquainted with, plaid with, but to understand the rules of nature an adult's opinion and ability to have conversation with the child comes of use.

Observing children's actions using previously mentioned criteria and analysis of children's phrases and conversations allows to conclude that 13% or 6 out of a total of 46 respondents had an inadequate or partial understanding of nature conservation, impatience, clumsy skills in practical work, lack of desire to evaluate experience. 22% or 10 children were characterized by a steady interest in nature preservation as well as determined, self-sufficient actions, taking care of potted plants and animals. An average level of understanding was observed in 65% or 30 children's experiences – children happily take part in actions started or suggested by adults, ask questions, take part in conversations, but a determined, self-sufficient, persistent action and patience to endure difficulties was lacking.

Conclusions

- Four to seven year old children's development of attitude towards and understanding of nature conservation is tightly connected to their applied work. A child ending up in a meaningful relationship with nature, taking care of pets, decorative plants and taking part in cleaning and improving works to the surrounding nature;
- Latvian natural tradition and folklore legacy mirrors the love towards the native land, bindingly describes different natural occurrences, which contributes for observation and reasoning skills, the virtue of work, developing the imagination of a child and is important for realizing folk social events about preserving nature;
- Pedagogue inquiry results show that – a healthy lifestyle, improving the immediate surroundings, maintaining a clean environment and sorting used materials so that you would get to know nature, are popular and well acquainted themes. Whereas less popular are the themes include climate change and energy conservation – in this regard more improvements need to be made with practical examples; more experience exchange needs to be made;
- Even though pedagogues express that the parents have different opinions towards open-air pedagogy, however embracing the work of eco – school project, as well as supporting a healthy lifestyle's incorporation, the parents value the preschool educational establishment initiatives positively. The parents agree that nature education along with educations' long-lasting developments are meaningful contributions to the society's life and is aimed towards the economization of natural resources and creating a responsible attitude for childhood.

Bibliography

1. Apiņa P., Mozga Dz. (red.). (2014). *Divpadsmit Latvijas ārstu biedrības ieteikumi veselībai veselīgai un kvalitatībvai dzīvei* (Latvian doctors' society's 12 recommendations for a living healthy, wellbeing and a qualitative life). Rīga, Latvijas Ārstu biedrība *Latvijas Ārsts*, (Latvian Medical Association *Latvian doctor*), 20 lpp. (In Latvian)
2. Brīvdabas pedagoģijas projekts "Saule" (2014). (Outdoor pedagogical project "Sun") Bilžu galerija. (Picture Gallery). Tūja, Latvia. [online] [02.01.2015]. Available at http://www.rpiva.lv/index.php?&mh=akt_bildes&galerija=888 (In Latvian)
3. Dahlgren L.O., Szczepanski A. (2008). *Outdoor Education – Literary education and sensory experience*. Kinda Education Center, Kisa – Tryckeriet AB, Kisa, Sweden, p. 62.
4. Hibberd J., Usmar J. (2014). *This Book Will Make You Happy*. Quercus Editions Ltd, London, UK, p. 154.
5. *Izglītība pārmaiņām: Ilgstspējīgas attīstības mācīšanas un mācīšanās rokasgrāmata* (Education for Change: The sustainable development of teaching and learning handbook). (2004). Ed. Jutvika G. The project "Education for Change", it is supported by the EU Comenius 2.1. Program. *Vides Vēstis* (Environmental News). Latvia. [online] [02.01.2015]. Available at http://videsskola.lv/attachments/020_Rokasgramata.pdf (In Latvian)

6. Latvijas Riteņbraucēju apvienība. (2015). (Latvian Association of Cyclists). [online] [02.01.2015]. Available at http://www.divritenis.lv/?ct=latrit (In Latvian)
7. Papīrfabrika Līgatne (2015). (Līgatne Paper factory). [online] [02.01.2015]. Available at http://lv.wikipedia.org/wiki/Pap%C4%ABrfabrika_%22L%C4%ABgatne%22 (In Latvian)
8. Pipere A. (2005). *Veselības psiholoģija: Cilvēks. Vide. Perspektīvas.* (Health psychology: Man. Environment. Perspectives). Daugavpils Universitātes izdevniecība "Saule", 104 lpp. (In Latvian)
9. Priede L. (2007). Ekoloģiskās audzināšanas aspekti pirmsskolā. (Ecological education aspects in preschool). In: Freiberga I., Priede L. *Bērns mācās izzināt pasauli.* (*The child learns how to explore the world).* Rīga: SIA Izglītības soļi, 43 – 51.lpp. (In Latvian)
10. Stola I. (2001). *Vides izglītība pamatskolā* (*Environmental education at basic school).* Rīga: RaKa, 196 lpp. (In Latvian)
11. Sulu un piena paku vākšanas kampaņa "Šķiro pakas"! (2013). (Juice and milk pack collection campaign "Sorting packages"!) Biedrība *Latvijas Zaļā josta*. (NGO Latvian Green belt), ZALAJOSTA.LV [online] [02.01.2015]. Available at http://zalajosta.lv/lv/sulu-un-piena-paku-vaksanas-kampana-skiro-pakas (In Latvian)
12. Špona A. (2006). *Audzināšanas process teorijā un praksē.* (*In theory and in practice the education process).* Rīga, RaKa, 211 lpp. (In Latvian)
13. Solis pretī vietējai un ekoloģiskai pārtikai skolu ēdienkartēs? "Veseli ēduši!" - FOCUS.LV reportāža. (2013). (Step towards ecological and local food school menu? "Healthily eaten!" - FOCUS.LV reportage). Eco School program. [online] [02.01.2015]. Available at http://www.focus.lv/dzive/edieni/solis-preti-vietejai-un-ekologiskai-partikai-skolu-edienkartes-veseli-edusi-focuslv-reportaza (In Latvian)
14. Николаева С. Н. (2000). *Экологическое воспитание младших дошкольников.*(*Ecological education of the younger pre-schoolers).* Москва: Мозаика - Синтез, 96 с. (In Russian)

Education for getting competence

The Content Reform of Education for Sustainable Development

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Abstract: Ensuring of sustainable development of the society becomes more and more topical in the modern globalized society when the technologies develop rapidly, when all the branches of national economy modernize and the style and environment of every person change. One of the factors that will allow the society developing continuously and successfully is education. The aim of the article is to present the findings of the theoretical study that is based on the analysis of the strategic and normative documents of Latvia in different stages (history) of the education content reform. It found the expression in the depolitization of the education content at the beginning of the nineties of the 20th century. Initially the reforms were directed towards liquidating the Soviet traditions and democratization of the education content while developing a democratic society. Reforms in education move from sorting out the content of education to putting in order the network of educational institutions and their modernization taking into consideration the impact of globalization and caring for sustainable development. The competence approach, the development of problem solving skills and the critical thinking skills are topical today in the improvement of the education content. As the result of the reforms the education content becomes more diverse, differential and flexible, more corresponding to the demands of the modern environment and the national strategic aims. However, there are still problems that are connected with objective and subjective conditions and that are to be solved in the implementation of the reforms.

Key words: education, sustainable development, reform of education content, history.

Introduction

To ensure sustainable development of the society in the modern globalized world when technologies develop rapidly and all the areas of the national economy are modernized and the life style of every person changes becomes a more topical issue. One of the factors that will allow the society to develop successfully in long term is education. Since the beginning of the nineties of the 20th century the education content in Latvia has experienced continuous changes and reforms. The aim of the education content reforms has been to make the content of general comprehensive education and the framework of its implementation in accordance with the development of the 21st century skills and a learner-centred, competence-based modern teaching/learning process. M. Fullan speaks about the broadest social task – the formation of a learning society which forms the basis of all education reforms (Fulans, 1999). This also changes the understanding about the pupils' achievement. This is no longer the totality of concrete measurable knowledge and skills but the ability to apply them in diverse life situations (Prensky, 2014).

The guidelines on the development of education 2014 – 2020 define several aims that will promote sustainable development of the society. The first of them envisages the improvement of the quality of the educational environment by improving the content and developing the infrastructure. In order to achieve this it is planned to implement measures for increasing the quality of pedagogues' motivation and professional performance, the improvement of the education content according to the competences required in the society, the modernization of the educational environment and process as well as the implementation of the principles of inclusive education. The second aim envisages promoting the development of the individual's professional and social skills for life and competitiveness in the labour environment. To achieve this aim it is planned to develop the career education, to widen to possibilities of interest education for children and young people, to improve the adult education possibilities as well as to decrease the number of early school drop-outs. The third aim anticipates the improvement of the effectiveness of resource management by developing the institutional excellence of the institutions and consolidation of resources. In order to achieve this, the network of educational

institutions will be rearranged, the quality of monitoring system of education will be improved and a new model for remuneration of the pedagogues' work will be worked out (Bukovska, 2014).

The time has come to explore and further analyse the previous reforms in order to direct the education content reforms towards purposeful and sustainable development of the society. Therefore the further direction of the education content reform should be implemented under the guidance of education content, innovation policy and value education (Mūrnieks, 2014).
The aim of the article is to present the findings of the theoretical study that is based on the analysis of the strategic and normative documents of Latvia in different stages of the education content reform.

Methodology

Education for sustainable development

To ensure sustainable development of the society in the modern globalized world when technologies develop rapidly and all the areas of the national economy are modernized and the life style of every person changes becomes a more topical issue. One of the factors that will allow the society to develop successfully in long term is education. It promotes the formation of active, creative and productive attitude and the development of the necessary competences of every member of the society and especially the young generation.

One of the aims of sustainable development of the society in Latvia defines that Latvia has to develop the welfare society which appreciates highly and develops democracy, equality, fairness and the cultural legacy (Latvijas ilgtspējīgas…, 2010). It also defines the most important strategic principles that are to be observed facilitating the sustainable development of the country. They are – creativity, tolerance, cooperation, participation. These are the principles that are included in the school curricula. Some time ago H. Gudjon pointed out that the function of education is not only to lead the individual into the society and to exercise the observation of its rules but also to develop critical, reflexive distance (Gudjons, 1998). Well-considered education content reforms promote and ensure sustainable development of the society. They pay attention to the development of modern learning content emphasizing those school subjects that facilitate more profound understanding of the society's development, promote science competence and the acquisition of cognitive skills. Education for sustainable development is necessary for participation in the decision making about individual or collective actions on the local and global level to improve the life quality now without creating threats for the needs for the future generations. This is also defined by the Law on Environment protection of Latvia (Vides aizsardzības…, 2013). UNESCO in its turn, explains education for sustainable development of the society as education that develops and strengthens the ability, skills and willingness of separate groups of individuals and the society as a whole both on the level of organizations and the countries to make decisions and choices that would promote sustainable development (Education for Sustainable..., 2015).

Participation of Latvia's pupils in international comparative studies allows assessing the effectiveness of the education reforms that is directed towards sustainable development of the society. The achievement of Latvia's pupils is mainly average, a bit better achievement is in mathematics as it is proved by the latest OCECD (Geske, Grīnfelds, 2007) and TIMSS (Geske, Mihno, 2008) studies. Only 0.3% of all the 15 years old pupils involved in the OECD study are able to identify purposefully, explain and apply science knowledge and knowledge about science in different life situations, to substantiate their opinion, to demonstrate clearly their scientific thinking and judgement, to apply their science understanding to be able to find solution in different new situations.

Education for sustainable development is characterised by (Baltic 21E, 2002):

- integrated approach to economic and social development;
- basing on the diversity in culture, everyday life and economy;
- responsibility for the people's life conditions and environment;
- participation of the society in the decision making;
- observance of regional, national and global contexts;
- integrated teaching/learning process.

D. Tilbury and D. Wortman, in their turn, (Tilbury, Wortman, 2004) describe the essence of education for sustainable development in the following way:

- imagination: the ability to imagine a better future because if we know where we are going then we can choose the best ways to achieve it;
- critical thinking and reflection;
- systemic thinking that allows solving problems more successfully;
- developing of partner relations, learning to work together;
- participation in the decision making.

Education for sustainable development envisages that there should be orientation from providing knowledge to the solution of problems. (UNECE strategy..., 2005) The traditional orientation to separate subjects is preserved and at the same time the exploration of the multi-field and inter-field real life situations is performed. This influences the education content reform.

Education for sustainable development requires also a principally another solution to different problems from the individual. The education content reform anticipates that pupils' independence in judgement, open and flexible thinking, readiness to perceive each piece of new information with clear vision and careful evaluation as well as the readiness to reassess one's opinion and not taking solutions as final and irrevocable is being developed.

Education content reform

The education content reforms since the beginning of the nineties of the 20th century have been oriented towards ensuring sustainable development. Initially the reforms were directed towards the elimination of the Soviet traditions and democratization of the educational institutions when forming a democratic society. The freedom of schools in developing their curricula increased. Optional subjects as well as a number of new school subjects, e.g., economics, environment studies, health, civic education, informatics, history of culture, politics and philosophy, optional foreign languages etc., were introduced in schools. During the end of the nineties of the 20th century the transition from free selection of subjects in the secondary school to four secondary education curricula ensuring a balanced acquisition of all school subjects (including – physics, chemistry, biology) took place. On the turn of the centuries and at the beginning of the 21st century more attention was paid to the content reform of basic education, digitalisation of the education system and introduction of bilingual education in the Russian language instruction schools.

Nowadays we have to ensure the competitiveness of the education system with restricted resources. The reforms are moving from arranging the education content to the arrangement and modernisation of the institutional network taking into account the impact of globalisation and caring for sustainable development. The competence approach, the solution of problem situations, the development of critical thinking skills is topical nowadays in the improvement of the education content.

The results of international comparative studies of pupils' knowledge and skills and their analysis, e.g. OECD, TIMSS, etc., have great importance in the education content reform. OECD studies in education show that Latvia, for instance, does not reach the level of Finland; at the same time, taking into consideration the miserable funding per pupil we are at the same place as such super powers as the USA, France or Russia (Matisāne, 2011). This serves as evidence that the direction of the started education content reforms deserves positive assessment; it is directed to sustainable development of the society and education. Also one of the findings of the study that was performed in Riga Education and Management Academy under the supervision of professor Ausma Špona indicates that Grade 11 pupils expect from school knowledge and purposeful development of their abilities. (Špona, Igoņins, 2011) This actually coincides with the aims of the Education Development Guidelines 2014 – 2020 which define further advance of education content reforms.

Results and discussion

Several important stages in the education content reform in Latvia can be singled out.

1990 – 1994 - are years that are characterised by decentralisation and democratisation of the education system and its management. Education content during this stage is being de-politicised which is promoted by the adoption of the Law on Education in 1991. The national education content which defines the development and implementation of the school subject standards is being developed. A 10-point scale for assessing pupils' academic achievement is introduced and accreditation of educational institutions that allowed following the education reforms in the aspect of sustainability is commenced.

1995 – 2002 – the education content reform the framework of which in basic education was defined by the new National Standard of basic education is started. The content of education is more and more adjusted to the needs of the society. New subjects are introduced in the content of learning – civic education, economics, health education, ethics, and Christian studies. English is defined as the first foreign language. The main idea of the reform is that education must ensure the balance between theoretical knowledge and the skill to live in the real world and to solve concrete life tasks (Izglītība Latvijā, 2015).

The advance of reforms was consolidated by the new laws in education – Law on Education (1999), Law on General Education (1999), Law on Vocational Education (1999) and Law on Higher Education Institutions (1995) as well as the Conception on the Development of Education of Latvia (1995). The transition to the principle of education curricula according to which secondary education implements four different kinds of education curricula – general educational programs, humanitarian and social education programs, mathematics, science and technical education programs, vocationally oriented education programs is implemented during this period. The introduction of minority education programs is started during this period. Guidelines of preschool education are being developed. The state examination and testing system is established. Besides, the descriptive assessment is introduced in Grades 1-3 of the primary school. The renewal of the infrastructure of education that serves as the basis for ensuring the sustainability of the education content reform is also started (Izglītības likums, 2015).

2003 – 2005 – the education content reform continues which is characterised by the introduction of the new subject standards and the state centralised examinations in basic education. Secondary schools that implement minority programs start the transition to tuition in the Latvian language. A unitary system of assessing the work of schools and the external assessment system that allow following the course of the education content reform and its quality are worked out in the country. New information technologies are introduced rapidly in the educational institutions and this has a crucial impact on the education content reform thus ensuring the development of sustainable education.

2006 – 2011 are years when mandatory preparation of 5-6 years old children for the acquisition of basic education in the preschools or specialised groups organised in schools is implemented. At the same time the education content reform continues. The school network is being rearranged- smaller schools are closed or merged with/ added to larger schools. Regional methodological centres in state gymnasia that provide substantial support to the implementation of the education content reform are established. Evaluation of higher education study programs to prevent the duplication and to arrange the network of higher education institutions as well as the work on arranging the network of vocational education institutions is started. Competence centres of vocational education that provide methodological support to the education content reform in vocational education are established. The cooperation of vocational education institutions with employers, professional associations and municipalities that is directed towards ensuring sustainability strengthens. Besides, distance learning finds its way not only in higher education but also in general secondary education. Transition to competence approach in education that gives new advance to the education content reform in the sustainability aspect is commenced. Higher education institutions are offering more studies and separate courses in e-format. E-class where parents and pupils can receive immediate information about the academic achievement and the acquisition of the learning content is developed which serves as a good support to the reforms and allows following its quality.

2011 – 2014 – the education content reform still continues. Now it is characterised by the competence approach in the State education standards and the curricula of different levels (MK Nr. 468, 2014; MK Nr. 281, 2013). Value education is paid particular attention. The arrangement of the network of vocational education institutions continues and dual education model is introduced in vocational education.

Conclusions

It is possible to judge about positive outcomes in the education content reform not by the course how the new reforms are being historically implemented but by how these changes influence the future of the people, the economy of the country and the quality of life in short-term or long-term perspective. The current education content reform is directed towards ensuring sustainable development of the society.

However, reforms at some point could have been too rapid. New subject standards were developed; the Law on Education anticipated that each teacher had the rights to develop his/her own subject syllabus or choose some of the developed programs. The new education standards were followed by immediate introduction of the state testing system and centralised examinations. There was not sufficient time for the approbation of the standards and programs. Teachers lacked methodological support in the implementation of the new teaching/learning content.

At the same time digitalisation of schools, more extensive application of new technologies in the teaching/learning and the study process, the accessibility of learning materials in the e-environment, introduction of distance education not only in adult education but also in schools an opening of distance education classes deserve positive acknowledgement. This pays off in today's situation when many inhabitants of Latvia under the impact of the economic crises had sought employment and residence in other countries. Their children have the possibilities to continue education in Latvia in the form of distance education in the e-environment.

Bibliography

1. Baltic 21E. (2002). *Izglītība ilgtspējīgai attīstībai Baltijas jūras reģionā*. (Education for Sustainable Development in the Baltic Sea region). Rīga, SIA Izglītības soļi. (in Latvian)
2. Bukovska D. (2014). *Valdībā apstiprināts Izglītības attīstības pamatnostādņu projekts 2014. - 2020. gadam*. (The government approved the draft guidelines for the development of education in 2014 - 2020). [online] [02.01.2015]. Available at http://www.unesco.lv/lv/izglitiba/valdiba-apstiprinats-izglitibas-attistibas-pamatnostadnu-projekts-2014-2020-gadam (in Latvian)
3. *Education for Sustainable Development*. The Baltic Sea Project. UNESCO. [online] [05.01.2015]. Available at http://www.unesco.lv/en/education/education-for-sustainable-development/education-for-sustainable-development-1/
4. Fulans M. (1999). *Pārmaiņu spēki*. (Change Forces) Rīga, Zvaigzne ABC (in Latvian)
5. Geske A., Grīnfelds A., Kangro A., Kiseļova R. (2007). *Kompetence dabaszinātnēs, matemātikā un lasīšanā – ieguldījums nākotnei. Latvija OECD valstu starptautiskajā skolēnu novērtēšanas programmā 2006.*(Competence in science, mathematics and reading - investment in the future. Latvia OECD countries in international student assessment program 2006th). Rīga, LU IPI (In Latvian)
6. Geske A., Mihno L. (2008). *Matemātika un dabaszinātnes sākumskolā. TIMSS 2007 pētījums Latvijā*. (Mathematics and natural sciences in primary school. TIMSS 2007 study Latvian). Rīga, LU, IPI (in Latvian)
7. Gudjons H. (1998). *Pedagoģijas pamatatziņas*. (Pedagogical foundations). Rīga, Zvaigzne ABC (in Latvian)
8. *Izglītības likums* (2015). (Law on Education). [online] [01.01.2015]. Available at http://likumi.lv/doc.php?id=67960; http://likumi.lv/doc.php?id=50759 (In Latvian)
9. *Izglītība Latvijā* (Education in Latvia). [online] [01.01.2015]. Available at http://www.education.lv/1.htm (in Latvian)

10. *Latvijas ilgtspējīgas attīstības stratēģija līdz 2030.gadam* (2010). (Latvian Sustainable Development Strategy to 2030). [online] [16.12.2014]. Available at http://baltadaba.lv/wp-content/uploads/2013/04/latvija2030_lv.pdf (In Latvian)
11. Matisāne I. (2011). *Izglītības satura izmaiņas rada kvalitatīvi citu izglītību*. (For education content changes are caused by other high-quality education). [online] [03.01.2015]. Available at http://www.lvportals.lv/visi/viedokli/229181-izglitibas-satura-izmainas-rada-kvalitativi-citu-izglitibu/ (In Latvian)
12. MK noteikumi Nr. 468 (2014). *Noteikumi par valsts pamatizglītības standartu, pamatizglītības mācību priekšmetu standartiem un pamatizglītības programmu paraugiem* (Regulations on the state standard of basic education, primary subject standards and basic curriculum). [online] [20.12.2014]. Available at http://likumi.lv/doc.php?id=268342 (In Latvian)
13. MK noteikumi Nr.281 (2013). *Noteikumi par valsts vispārējās vidējās izglītības standartu, mācību priekšmetu standartiem un izglītības programmu paraugiem.* (Regulations on the state general secondary education standard, subject standards and curriculum models). [online] [21.12.2014]. Available at http://likumi.lv/doc.php?id=257229 (In Latvian)
14. Mūrnieks A. (2014). *Izglītībā tikai pārmaiņas vai attīstība?* (Education only change or evolution?). [online] [01.12.2014]. Available at http://www.izglitiba-kultura.lv/raksti/izglitiba-tikai-parmainas-vai-attistiba (In Latvian)
15. Prensky M. (2014). *The World Needs a New Curriculum.* New York, The global education foundation and institute, LTD.
16. Špona A., Igoņins D. (2011). Skolēnu attieksme pret skolu un savas nākotnes perspektīvām kā pedagoģiska problēma. (Pupils' attitudes toward school and their future prospects as a pedagogical problem) in Špona A. *Mūsdienu skolēni Rīgā un Maskavā*. (Modern students in Riga and Moscow). Rīga, RaKa (In Latvian)
17. Tilbury D., Wortman D. (2004). *Enganging People in Sustainability*. Gland, IUCN
18. UNECE strategy for education for sustainable development. (2005). [online] [16.12.2014]. Available at http://www.unece.org/fileadmin/DAM/env/documents/2005/cep/ac.13/cep.ac.13.2005.3.rev.1.e.pdf
19. *Vides aizsardzības likums* (2013). (Law on Environment protection of Latvia). [online] [16.12.2014]. Available at http://likumi.lv/doc.php?id=147917 (In Latvian)

Specifics of Youth Tolerance: Policy Agenda and Reality in Baltic States

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Abstract: Education plays a crucial role in the success of European political integration. That includes educational strategies that recognize diversity, protect shared ideals, accept the differences as well as promote a mutual understanding and tolerance. According to international and national policy documents an 'ideal' member of society has developed good cooperation and communication skills as well as tolerance towards different social groups. In reality, young people maintain values of consumerism and individualism, not valuing tolerance and humanity so highly. The subject of the paper is the characteristics of youth tolerance in Baltic States. The purpose of the paper is to study specifics of youth tolerance in Baltic States, whether it corresponds to the principles set by the planning documents in the area of youth and educational policy. Comparatively-descriptive research design was chosen to measure youth tolerance; it allows obtaining rather vast and detailed information, simultaneously providing opportunity to compare expressions of youth tolerance in all Baltic States. The research includes data from international project "Solidarity Schools in the Baltic States" (2014); during the project school age youth (ages 13-19) in elementary and secondary schools in Latvia, Estonia and Lithuania were surveyed using quantitative research approach to discover their role in society as active action entities, their level of tolerance and attitude towards the goals of global education and sustainable development. Results help to identify the areas where education could play its role in shaping attitudes of young people towards the necessary evolution of tolerant and democratic society.

Keywords: youth, social tolerance, acceptance, social distance.

Introduction

Different challenges in society force us to look for solutions on local, national and global levels in order to ensure equal division of resources, respect for human rights, tolerance and solidarity among individuals, countries and supranational organizations despite dynamic changes in present-day society and world (Kronberga, 2014). One of the instruments for achieving of these goals is global education approach in the context of formal, informal and life-long education. Global education is active learning process that is based on the values of solidarity, equality, social inclusion and cooperation. It allows people to move from recognition of international development priorities and sustainable human development with understanding of causes and effects of global issues to personal involvement (Globālā skolotāja…, 2013).

Global education approach was developed to apprehend diversity of social groups and encourage development of inclusive society, taking into account the aspect of globalization. Global education approach not only helps forming an appreciation of global issues, but also creating comprehension of their influence on local level and personal involvement accentuating goal-oriented education which is dominated by such values as tolerance, solidarity, equality, justice and inclusion. All these basic values of global education are significant in creation of environment supportive of social diversity (ethnicity, culture, sexual orientation, age, gender, abilities, socio-economic standing etc.), understanding its forming reasons and encouraging tolerance towards diversity (Kronberga, 2014).

As we see above, tolerance is one of essential elements of global education. Social science researchers view tolerance as both political and social phenomenon. In the political sense tolerance is the ability to tolerate not just the political views of others, but also their right to express those opinions publicly is at the root of political tolerance in a democracy. In addition, tolerance demands making allowances not only for the political opinions of others but also for other aspects of their lifestyles, especially where these lifestyles differ from one's own (Pattie, Johnston, 2006). Tolerance or broadmindedness in social life is defined as non-intervention into views, actions or practises that are considered to be wrong, but tolerable, thus not subject to banning or limitation. Tolerance is conceding to the views or practices

that are contrary to one's own (Muižniece, 2007). So tolerance is ability to accept different culture and permit its existence. Theoretically, we distinguish 3 attitudes towards foreign culture that can be used to measure a level of tolerance: 1) intolerance or chauvinism, 2) tolerance, and 3) acceptance (recognized as equal or normal) (Triandafyllidou, 2013).

It is popular to interpret tolerance as individual quality. Practice of individual tolerance can be defined as ability to accept and respect views, religious affiliation and behaviour of other people (Osis, Ose, 2006). Tolerance as social practice means commendation/non-condemnation of those whose convictions, behaviours or actions vary from individual's perception of the desirable. Social tolerance is incompatible with any type of discriminating talk or deed, as well as open expression of intolerance. Tolerance means respecting different cultures, forms of human self-expression, as well as their acceptance and correct comprehension. Tolerance is not only moral duty, but also political and legal necessity. Tolerance is active attitude that is based on understanding of human rights and basic values (Austers, Golubeva, 2008).

Many international and national planning documents in the area of educational and youth policy accentuate tolerance as essential human value. The EU Council conclusions of May 12th, 2009 on a strategic framework for European cooperation in education and training 2020 include an acknowledgment that education and training have a crucial role to play in meeting the many socioeconomic, demographic, environmental and technological challenges facing Europe and its citizens today and in the years ahead. In the period up to 2020, the primary goal of European cooperation should be to support the further development of education and training systems in the Member States which are aimed at ensuring sustainable economic prosperity and employability, whilst promoting democratic values, social cohesion, active citizenship, and intercultural dialogue (Notices from…, 2009).

National documents in Baltic States also define a goal of facilitating equal opportunities, social inclusion and solidarity for all youth using the means of educational and youth policy. Latvian Strategy for sustainable development until 2030 distinguishes 4 areas that make up the bases for the future society of Latvia: creativity, tolerance, cooperation and participation. Tolerance implies reduction of all types of social exclusion and discrimination, including income inequality, age and gender discrimination in labour market, ethnic bigotry, and institutional linguistic barriers (Latvijas ilgtspējīgas…, 2010). Terms of standards of primary education mentions tolerance as one of the qualities necessary for a pupil that is being developed throughout several subjects, emphasizing necessity to be tolerant towards different gender, age, religious, race, ethnic origin and other social groups in Latvia (Noteikumi par..., 2013).

In Lithuanian planning documents tolerance is mentioned in more general terms as one of the values of the National Strategy on Education for 2013-2022. Education in Lithuania is based on the key values of the nation, Europe and global culture: the unrivalled value and dignity of an individual, love of our fellow, the natural equality of people, the human rights and freedoms, tolerance, and declaration of democratic relations in the society. Education is developing determination and ability of an individual to follow these values in all walks of life and activity (Valstybiné švietimo.., 2013).

Analysis of Estonian planning documents shows that tolerance as socialization of democracy among youth is being paid special attention. General human values (honesty, compassion, respect for life, justice, human dignity, respect for self and others) are enshrined as core values, as are social values (liberty, democracy, respect for mother tongue and culture, patriotism, cultural diversity, tolerance, environmental sustainability, rule of law, solidarity, responsibility and gender equality) (National Curriculum…, 2011). Tolerance as a principle is reflected in guidelines for work with youth (Youth Policy..., 2010; Bart, Muursepp, 2014) and in planning documents for education on all levels as well. It means that principles of tolerance are implemented starting with preschool and ending with long-life education. Besides, studies and policy monitoring is carried out on a regular basis to assess the existing situation.

Despite to existence of formal documents and the goals defined in them, implementation of tolerance in real life meet different obstructions. Educational content that promotes tolerance might not reach its goal if there is no open and inclusive environment in school and society that teaches pupils to accept

diversity (Austers, Golubeva, 2008). Also, makers of education policy often avoid accentuating the issue of tolerance in political documents, turning their attention more to the aspects of patriotic education. Lack of teachers or insufficient qualification, inability to work individually and different students, considering their learning pace, as well as overall orientation of education system towards exam results, not learning and individual growth as main goal – all these things create encumbrances for carrying out socially inclusive functions of education (Austers, Golubeva, 2008).

Considering common historical and sociocultural experience and geographic location of Baltic States it can be assumed that present-day transformation processes affect youth in a similar manner. At the same time youth tolerance can be viewed as one of indicators that allow discovering similarities and differences of processes taking place in Baltic States. So the goal of the paper is to study specifics of youth tolerance in Baltic States, whether it corresponds to the principles set by the planning documents in the area of youth and educational policy.

Methodology

Comparatively-descriptive research design was chosen to measure youth tolerance; it allows obtaining rather vast and detailed information, simultaneously providing opportunity to compare expressions of youth tolerance in all Baltic States. The research includes data from international project "Solidarity Schools in the Baltic States" (2014); during the project school age youth (ages 13-19) in elementary and secondary schools in Latvia, Estonia and Lithuania were surveyed using quantitative research approach to discover their role in society as active action entities, their level of tolerance and attitude towards the goals of global education and sustainable development.

In the context of this survey tolerance is conceptualized in two directions. One of them implies measuring youth social distances against different social groups. Social distance is feelings or relations of „aloofness and unapproachability", especially between members of different social strata. The term was introduced by Park and Burgess and popularized by Bogardus, who also formulated a social-distance (or Bogardus) scale, designed to permit the extent of tolerance or intolerance between social groups (Jary, Jary, 1995). Bogardus scale is used in determining social distance, but it is adapted for the specifics of school youth and restructured with 4 categories where the first indicates the shortest social distance and the fourth – the longest social distance (Picture 1).

Survey questionnaire includes several categories of social groups to measure youth social distance: groups at risk of poverty (unemployed, single parents, people with disabilities, youth from poor families), deviant (alcohol and drug addicts, prostitutes, former prisoners, homeless, homosexuals), groups of ethnic/racial diversity (children of Chinese immigrants, young people with different mother tongue, members of other race), as well as relatively successful or socially prestigious (children of bankers, popular singer/actor, new businessman, self-employed) and neutral (youth from the country, people of retirement age, committed Christians).

The second direction of conceptualization reveals one of the action aspects of tolerance or the perception of youth to help the people that experience social problems and that within the context of study of tolerant attitude are critical cases since most society holds prejudices against them: people with physical/mental disabilities, drug addicts, migrants, prostitutes, poor people, refugees, people with homosexual orientation, homeless, Roma people, alcoholics, beggars and elderly. Within the result interpretation, youth tolerance is understood as measurement "should look for ways to help these people", indifference or aloofness expresses itself in answer "they must solve their problems themselves", and intolerance – „they must be isolated from society" (Table 1).

The basis of research is made of 1413 young people from Baltic States that attend elementary/secondary school where 555 are from Latvia, 449 – from Estonia and 413 – from Lithuania. Even though one of improbable sample methods – accessibility sampling was used for the selection of respondents, since the questionnaire was filled in by the students of schools involved in the project „Solidarity Schools in the Baltic States", sample realization adhered to the principles of territorial sampling as well. That way the sample includes youth from cities, towns, peri-urban areas and rural areas. Sampling was limited by project requirements, so in order to obtain representative results it would be necessary to broaden the sampling.

Mostly relative indicators and central tendencies and dissipation parameters have been used for processing of quantitative data obtained in the survey and displaying of division of youth opinions. Although data does not comply with normal division, the arithmetical mean and standard deviation have been used for comparison in the interstate context. Such exception was allowed in order to discover insignificant differences in youth attitudes that are not revealed by central tendency indicators. Besides, nonparametric Mann-Whitney and Kruskal Wallis tests were used for statistical assessment of differences in youth opinions where p-value method was used for result interpretation (significance level 0.05).

Results and discussion

Surveyed youth from all three Baltic states express relatively different attitude towards various social groups in society which is testified by the fact that youth people are ready to include into the circle of their friends or acquaintances representatives of socially acceptable, prestigious or/and relatively neutral and groups at risk of poverty and social exclusion, but their distance to deviant groups is greater, since young people accept them as residents of their country but not their close acquaintances. These tendencies in attitudes characterize young people from all three Baltic States (see Picture 1).

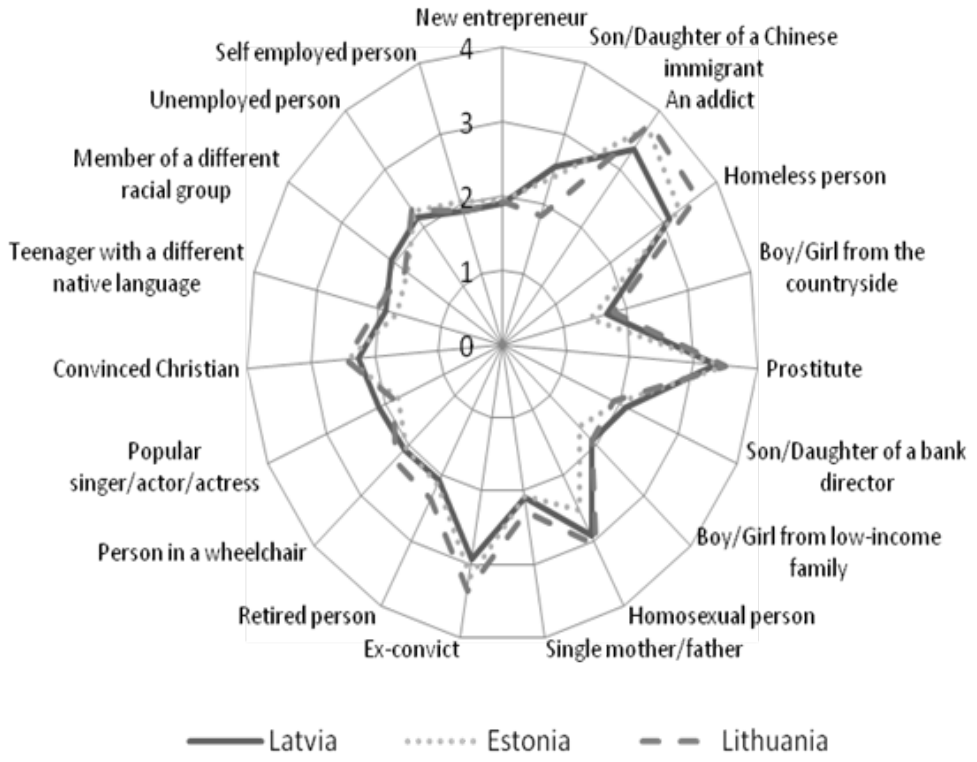

Figure 1. Social distance of youth to different social groups.
Categories: He/she could be a close friend - 1, He/she could be an acquaintance - 2, He/she could be a resident of my city/country - 3, I wouldn't like him/her to live in my city/country – 4.
Source: Authors' estimates based on data of the research "Solidarity schools in the Baltic states"

In Latvia surveyed youth show more tolerance towards young people from the country, young people with different mother tongue, self-employed individuals, young people from poor families and new businessmen (mean<1.99). Their peers from Estonia feel close social distance to young people of following groups: young people from the country, young people from poor families, young people with different mother tongue, popular singers or actors, young people of different racial groups, new businessmen and children of bankers. Young people from Lithuania are also ready to accept into their

circle children of Chinese emigrants, thus expressing greater tolerance towards 3 more social groups comparing to Latvian youth. Lithuanian youth feel closest to young people from the country, representatives of different race, previously mentioned children of Chinese emigrants, popular singers or actors, children of bankers, young people from poor families, self-employed persons and new businessmen.

All surveyed youth in all three countries feel the biggest distance to members of deviant groups (mean>2.93). Alcohol and drug addicts, prostitutes, former prisoners and homeless are those experiencing the lowest level of tolerance. Similar situation can be witnessed towards homosexual people that in Latvia and Lithuania received more negative assessment in comparison with previously mentions groups (mean=2.93–3.06). Slightly more liberal attitude is shown by surveyed youth from Estonia that has expressed willingness to see representatives of sexual minorities in their circle of acquaintances comparing to young people of other two countries. But the assessment of members of this social group shows the highest dissipation of views (SD>1.08) that indicates the choice of different and even extreme answers within the same country.

Overall high tolerance level is observed towards all socially acceptable or prestigious social groups, although not always young people mention representatives of these groups among the closest and most acceptable. Small social distance is observed towards groups of specific ethnic/racial differences, groups at risk of poverty and social exclusion.

Lower tolerance level is shown towards committed Christians and unemployed. Although the members of these groups did not receive assessment as negative as the members of deviant groups, youth of all three countries would rather avoid including them in their circle of friends and acquaintances. Similar assessments are made in Latvia and Estonia towards children of Chinese emigrants, and in Lithuania – towards pensioners and people with physical disabilities. Although there is rather large dissidence towards children of Chinese emigrants among young people of Latvia and Estonia (SD=1.10), Lithuanian youth, while assessing pensioners and people with physical disabilities, have been more single-minded (SD<1.00) and among them there is no significant dissipation of opinions. Thus not only deviant behaviour, but also religious convictions, racial differences, age, health and displacement from the labour market can be considered to be risk factors of intolerance.

Considering calculated average social distances in relation to all social groups within each country, surveyed Estonian youth shows highest level of tolerance (average index – 2.30). They are followed by Latvian peers (average index – 2.33), and slightly lower tolerance is demonstrated by surveyed Lithuanian youth (average index – 2.42).

Although average indicators reflect rather similar overall level of tolerance in each country, different expressions of dissipation in opinions are observed in all countries. In relation to 16 out of 19 social groups, opinions of Baltic youth cannot be statistically considered as being significantly different ($p<0.05$). Whereas Baltic youth feels similar level of social distance only towards new businessmen ($p=0.665$), unemployed ($p=0.063$) and self-employed people ($p=0.053$).

One of the indicators of tolerant or, quite contrary, intolerant attitude is shown not just by social distance to different social groups, but also by level of willingness of youth to help and share social responsibility. Critical cases in expression of tolerant attitude are considered those towards people that have different social problems and are traditionally held in prejudice by society (see Table 1).

Highest tolerance among surveyed Latvian youth is shown towards people with physical/mental disabilities, elderly people, homeless and beggars. More than 50% of youth acknowledge that society should be looking for ways to help members of these social groups. Whereas relative indifference is expressed towards migrants, prostitutes, refugees, Roma people and alcohol addicts, since about 38-42% of the surveyed consider unnecessary for society to help these groups and are sure that members of these groups must solve their problems on their own. Curiously enough, the answers of surveyed Latvian youth show rather expressed intolerant attitude towards drug addicts, prostitutes, homosexuals and alcohol addicts, since about 40% of the surveyed believe that members of these groups must be isolated from society.

Table 1

Perception of youth of necessity to help people with social problems

How do you think people with different social problems should be treated? %	Estonia			Latvia			Lithuania		
	Everyone should help them to live better	They need to deal with their problems on their own	They need to be isolated from the society	Everyone should help them to live better	They need to deal with their problems on their own	They need to be isolated from the society	Everyone should help them to live better	They need to deal with their problems on their own	They need to be isolated from the society
Disabled persons	98	2	0	95	4	0	99	0	1
Drug addicts	51	24	25	36	24	40	74	13	13
Migrants	65	30	5	48	42	10	82	15	3
Prostitutes	28	46	26	20	42	38	37	41	22
Poor people	91	8	1	79	17	4	94	4	2
Refugees	53	32	15	37	39	24	87	9	4
Homosexuals	41	41	18	28	33	39	32	39	29
Homeless persons	87	10	3	67	24	9	69	23	8
Roma people (gypsies)	42	41	17	33	42	25	45	29	26
Drunkards	41	47	12	31	38	31	57	31	12
Beggars	67	26	7	51	33	16	75	17	8
Elderly (senior) people living alone	94	5	1	86	11	3	87	10	3

Source: Authors' estimates based on the data of "Solidarity Schools in the Baltic States" study

Picture different from Latvian survey results is seen in the Lithuanian and Estonian results that show relatively smaller part of youth demonstrating intolerant attitude towards particular groups of people. In Estonia about 25% of the surveyed believe that is would be necessary to isolate from society drug addicts and prostitutes which is 15% less than in Latvia. In Lithuania 29% of the surveyed would wish to isolate homosexuals, 26% - Roma people, and 22% - prostitutes. In Latvia and Estonia intolerant attitudes is demonstrated towards similar social groups, even though in Estonia it is not as expressed. In Lithuania intolerance of surveyed people was directed towards other social groups, except prostitutes that face distinct intolerance in all Baltic States. In the sense of dispersion it is similar to Estonia, since it covers about a quarter of the surveyed.

In Estonia more than half of the surveyed believe that social problems of eight groups – people with physical/mental disabilities (98%), elderly (94%), poor people (91%), homeless (87%), beggars (67%), migrants (65%), refugees (53%) and drug addicts (51%) - are shared responsibility of society. Whereas more than a half of surveyed youth in Lithuania consider that public is responsible for all members of groups affected by social problems, except prostitutes, Roma people and homosexuals.

It can be said that there are statistically significant differences of opinion among the surveyed youth of three Baltic States in relation to all social groups ($p<0.05$). Only in some cases data do not snow statistically significant variations. Opinions of surveyed Estonian and Lithuanian youth are similar to each other and are not statistically different in relation to three social groups – Roma people, poor

people and people with physical/mental disabilities (p>0.05). Lithuanian and Latvian youth demonstrate similar views of homeless (p=0.485) and elderly (p=0.709). Opinions of Estonian and Latvian youth are different in their assessment of all social groups.

Surveyed Latvian youth are much less willing to support collective solutions in helping groups affected by social problems and more often show intolerant attitude towards members of some groups in comparison with their Lithuanian and Estonian peers. Although social distance measurements showed less drastically different results, in the capacity criteria when a young person has to choose a particular mode of action and demonstrate his willingness no help, situation is different.

Conclusions

- Different social distance to different social groups is different among surveyed youth of Baltic States. Lowest tolerance threshold is against members of deviant groups – alcohol and drug addicts, prostitutes, former prisoners and homeless. Youth demonstrate expressed intolerance towards members of these groups and want them isolated from society. Highest tolerance is show towards socially acceptable, prestigious groups.
- Surveyed youth of Baltic States show definite individualism and unwillingness to get involved in solution of social problems. Surveyed youth believes that society should not solve problems of deviant groups. At the same time opposite opinion is expressed by surveyed youth about helping people with disabilities, elderly, poor people and homeless.
- Assessment of differences among Baltic States shows that slightly higher tolerance level towards different social groups is expressed by surveyed youth in Estonia and the lowest tolerance level is observed among youth in Lithuanian.
- The thought that, as a possibility, relatively higher tolerance level among surveyed youth in Estonia can be linked to implementation and monitoring of purposive youth and educational policy can be forwarded as a hypothesis for future research.
- Authors conclude that theoretical statements of tolerant society are not consistent with reality in Baltic States. Results help to identify the areas where education could play a role in shaping attitudes of young people towards the different social groups.
- Authors conclude that agenda of youth and educational policy must include dimension of global education in order to form more impartial and sustainable economic, social, environmental national and international policy that is based on human rights.

Bibliography

1. *Globālā skolotāja rokasgrāmata* (Global Teacher's Handbook) (2013). Humana People to People in Latvia, Rīga, Latvija, 128 pp. (In Latvian)
2. Jary D., Jary J. (1995) *Collins Dictionary of Sociology*. Second Edition. Harper Collins Publishers, Glasgow, 774 pp.
3. Kronberga R. (2014). Globālā izglītība kā pedagoģisks risinājums 7-11.klases skolēnu vērtīborientācijas pilnveidei pret dažādību. (Global education as a pedagogical solution 7-11. class pupils of value improvement of diversity) Maģistra darbs, LU, Rīga, Latvija, 120 lpp. (In Latvian)
4. Muižniece L. (2007). *Savējie un svešie. Sabiedrības radikalizācijas tendences Latvijā, Eiropā un pasaulē* (Belonging and Remaining Outside. Tendencies of Radicalization of Society: Latvia, Europe and the World). Strategic Analysis Commission under the Auspices of the President of the Republic of Latvia. Zinātne, Rīga, Latvija 37-64.lpp. (In Latvian)
5. Bart S., Muursepp L., Rannala I.E., Taru M., Toots M. (2014), Youth and Policy in Estonia. Youth Policy Press, 164 p. [online] [04.01.2014]. Available at http://www.youthpolicy.org/pdfs/Youth_Public_Policy_Estonia_En.pdf
6. National curriculum for basic schools (2011). *Riigi Teataja*. [online] [04.01.2014]. Available at https://www.riigiteataja.ee/en/eli/524092014014/consolide

7. Notices from European Union Institutions and Bodies. Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training (ET2020) (2009). Council EU. *Official Journal of the European Union* [online] [04.01.15.] Available at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XG0528%2801%29&from=EN
8. Triandafyllidou A. (2013) Tolerance, Pluralism and Social Cohesion: Responding to the Challenges of the 21st Century in Europe [online] [05.01.2015.]. Available at Riigi Teataja.
9. Pattie C.J., Johnston R.J. (2006). It's good to talk: Talk, disagreement and tolerance. University of Sheffield, 36 p. [online] [04.01.15.] Available at http://www.ggy.bris.ac.uk/personal/RonJohnston/CurrentPapers/Electoral/electoral8.pdf
10. Youth Policy Platform of Estonian National Youth Council (2010). Tallin, Eesti Noorteuhenduste Liit [online] [03.01.2014]. Available at http://www.enl.ee/UserFiles/Organisatsiooni%20tekstid/noortepoliitika/ENLi_noortepoliitika_platvorm_ENG.pdf
11. Austers I., Golubeva M., Strode I. (2008). Tolerances jautājumi skolās (Issues of Tolerance in the Schools). Sabiedriskās politikas centrs Providus, 48 lpp. [online] [01.01.15.] Available http://providus.lv/article/tolerances-jautajumi-skola (in Latvian)
12. Latvijas ilgtspējīgas attīstības stratēģija līdz 2030.gadam. (2010). (Latvian Sustainable Development Strategy 2030). LR Saeima. P. 100 [online] [03.01.15.] Available at http://polsis.mk.gov.lv/view.do?id=3323 (In Latvian)
13. Noteikumi par valsts pamatizglītības standartu, pamatizglītības mācību priekšmetu standartiem un pamatizglītības programmu paraugiem (2013). (Regulations of the state standards of basic education, standards of primary school subjects and basic curriculum, LR MK Noteikumi Nr. 530. [online] [03.01.15.]. Available at http://likumi.lv/doc.php?id=259125 (In Latvian)
14. Osis J., Ose L. (2006). Pētījumos balstītas stratēģijas tolerances veicināšanai. (In studies based strategies to promote tolerance). Rīga, *Biedrība Dialogi.lv* [online] [04.01.15.] Available at http://cilvektiesibas.org.lv/site/record/docs/2012/07/13/petbalst_strat_toler.pdf (in Latvian)
15. *Valstybiné švietimo2013–2022 metų strategija* (2013).(National Strategy on Education of the Republic of Lithuania 2013-2022). Lietuvos Respublikos Seimo. [online] [03.01.15.] Available at http://www.efhr.eu/download/rozne/NUTARIMAS%20DEL%20VALSTYBINES%20SVIETIMO%202013%E2%80%932022%20METU%20STRATEGIJOS%20PATVIRTINIMO.pdf

Teacher's ICT Competence in Home Economics and Technologies Lessons

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Abstract: The article summarizes the research data on the elementary school Home Economics and Technologies teachers' necessary ICT competences. Development of the educators' ICT skills and competences contributes to the free use of technology in different educational situations, stimulates the emergence of new teaching methods and the use of e–learning environment. **The aim** of the study is to investigate and determine what ICT competences are required for comprehensive school subject Home Economics and Technologies teachers. The study was conducted at Latvia University of Agriculture (LLU) in the Institute of Education and Home Economics (IMI) and in 9 urban and rural schools of Latvia, interviewing the subject Home Economics and Technologies teachers in schools and lecturers at LLU. The teachers' ICT competences expert assessment was made. This work theoretically describes the teachers' ICT competence in Home Economics and Technologies lessons. The teachers' ICT competence in Home Economics and Technologies lessons is described with the following skills: the ability to use IT facilities, to integrate knowledge, using IT to enrich the knowledge for new learning situation modeling; the ability to use test developing programs in e–environment. As the teacher at the same time has to know the use of computer and to be able to optimize the learning process in his/her subject, he/she needs both computer literacy and pedagogical proficiency, being competent in all Home Economics and Technologies topics. The teachers should be internally motivated and capable of acquiring knowledge continuously, which ensures systematic improvement of the necessary competences, therefore, guaranteeing the improvement of the teaching quality at school.

Keywords: teacher ICT competence, Home Economics and Technologies, school education.

Introduction

Information and communication technology (ICT) is rapidly developing nowadays, as many people are interested in everything modern and new. The importance of new knowledge and skills for our everyday life is continuously growing, so new information technologies have to be learned not only by students, but also by teachers. At present, information technology learning environment is used by all subject teachers, thus, a modern learning process is realized. In this context, the teacher should be able to keep up with the times; it is desirable to be an initiator.

Information and communication technologies is a dynamic field, in which the existing knowledge has to be regularly improved in accordance with the latest tendencies, and the tutors who are able to use it will feel support in their teaching process.

Simultaneously with the specific competences' and qualifications' accumulation, which determines a person's ability to enter the labor market and to build a successful professional career, education is also the developmental process of human talent, emotional and social intelligence, and personality. Therefore, the quality of education, its availability and content at all levels and for all age groups – from pre–school to adult education – is the opportunity for development and the precondition of human capital value rising in Latvia (Latvijas ilgtspējīgas attīstības ..., 2010).

Information technologies are rapidly developing and changing; therefore, it is important to improve one's knowledge and to develop one's own working style. In order to shape an educated and skilled society, in education it is necessary to promote innovation and the development of new qualifications, which focus on specific learning outcomes, as well as to facilitate the development of skills, suitable for the labor market needs. The possibilities of combining the acquisition of interdisciplinary content and specific skills are sought (New Skills for New Jobs: Action Now ..., 2010).

The author connects the topicality of the study with the idea that in order to work in the contemporary educational environment, the modern teacher has to be not only a professional in his/her subject, but also should be competent in information and communication technology field.

The author believes that the development of modern society largely depends on the competence of teachers. The largest educational target group consists of children and young people, and the teacher is the one who forms a new generation. Moving towards an information society, the educator himself/herself should be capable of using the latest information technology to be able to pass these skills to the learners.

The aim of the study is to investigate and determine what ICT competences are necessary for the teachers of the subject Home Economics and Technologies in comprehensive schools.

Teacher's competence

The requirements for education, schools and teachers are becoming more diverse and more complex – it is necessary to follow the rapid development and teaching approaches of different fields of knowledge, to create the conditions and environment for the students to acquire skills, to make students to be ready for a change, for lifelong learning. The competence of the teachers today is considered as a single whole with continuous competences' development and lifelong learning.

In the context of lifelong learning and education sustainable development, for a teacher, further education is the development of his/her professional qualification, necessary in order to maintain the existing and acquire new knowledge, skills and competencies that are currently being emphasized as professional experience and general education components. Lifelong learning is based on the internal need for spiritual development, as well as on the need to get and improve their knowledge and skills, generated by external factors. In modern age of rapid scientific and technological achievements and high technologies, the knowledge and skills acquired in terms of formal education are aging faster.

Lifelong learning with particularly organized formal and informal further education system contributes to full personal development, enabling people to adapt better to the social changes of the new century and, constantly raising their qualifications or even retraining, to maintain a high level of competitiveness in the labor market; promotes responsibility and participation of municipalities and employers in ensuring the access to education; provides the offer of professional primary and further education programs, considering the territorial structure of employed and socially not adapted population target groups, and, as a result, leads to reduced territorial socio-economic differences between the regions, as well as decreased migration of economically active population and rural youth; the population will have the access to vocational education based on the requirements of the labor market, as close as possible to their living (working) place (Izglītības attīstības pamatnostādnes 2007.-2013.gadam, 2006). The scientist J. Habermas formulated a new approach for understanding competence (Tiļļa, 2005): competence as the human ability to use the acquired in the activities, and to enhance it; as the unification of person's skills and attitudes, associated with the individual's abilities learn, communicate and collaborate; competence as the individual's quality level that conveys proficiency and operational responsibility.

The scientist A.Rauhvargers (2004) recommends the use of the following definition – competence is the combination of knowledge, skills and attitudes that makes one qualified for completing the tasks of a certain type or level.

The European Council has identified five groups of competences, which were included in the competences that should be developed by schools:

- political and social competences, such as taking responsibility, participation in group discussions, non–violent conflict resolving;
- competences that are related to living in a multicultural society, such as the acceptance of differences, respect for other people, readiness to live together with other cultures, languages and religions;
- spoken and written communication competences;
- information society competences – IT competence, evaluation of information disseminated in mass media;
- lifelong learning competence (Hutmacher, 1996.; 11–12).

Since information technology has entered the schools, Home Economics and Technologies teaching is changing; the lessons are becoming interactive, but not remote. The author believes that contact hours in the learning process are necessary and important, because if the students cannot hear the teacher or cannot see what is demonstrated, communication breaks down. Teaching is an art, and nothing can replace being in close relation to the teacher while learning.

In the European Qualifications Framework (EQF) concept of competence, learning outcomes for each of the EQF levels are presented as the statements of what learner knows, understands and is able to do on completion of acquiring the subject, and are defined as knowledge, skills and competence (Skaidrojums par Eiropas..., 2008):

- knowledge is the result of the assimilation of information, obtained during the learning process. Knowledge is the combination of work or study–related facts, principles, theories and practices. EQF describes knowledge as theoretical and/or factual;
- skills are the ability to apply knowledge and use skills to perform practical and theoretical tasks. EQF describes skills as cognitive (logical, applying intuitive and creative thinking) or practical (involving manual dexterity and using methods, materials, tools and instruments);
- competence is the proven ability to apply knowledge, skills and personal, social, and/or methodological abilities in work or study situations, and in professional and personal development. EQF describes competence in terms of responsibility and autonomy.

Teacher I. Ņikišina (Никишина, 2007) believes that the methodological training of teachers should facilitate independent personal and professional development, and be scientifically organized, systematic and purposeful.

The educator's competence consists of professional competence (subject, psychological, pedagogical competence) and socio–cultural competence (social, cultural, self–competence). The teacher should consider the mentioned competences as a means of self-realization, not as an end in itself. For the teacher, professional competence is associated not only with the ability to orientate oneself in the principles, forms and methods of the learning process, but also with the ability to manage the whole educational process and separate subject content. Socio–cultural expertise includes mutual cooperation of students, teachers and other people (Maslo, Tilla, 2002).

Each competence group covers a large variety of individual skills and abilities described in the table (Table 1).

Table 1

Structure of competence (Erpenbeck, Scharnhorst, 2005)

N	Competences	Competence description
1.	**Personality competencies**	Loyalty, tolerance, ability to take responsibility, ability to take responsibility for surrounding people and their actions, ability to trust and be trustable, self-presentation skills, ability to make decisions, ability to delegate responsibility for finances, etc.
2.	**Activity competencies, management competencies**	Energy, readiness for challenge, readiness to take risk, mobility, flexibility, ability to manage recourses (external, internal), inactive, etc.
3.	**Professional competencies**	Professional knowledge, professional knowledge in certain areas, comprehensive knowledge on global market trends, ability to plan in team and on your own, professional skill on work in team and on your own, etc.
4.	**Social, communication competencies**	Communication skills, ability o argue, reasoning skills, presentation skills, skill to cooperate, ability to get to know people (empathy), ability to speak in front of audience, skill to motivate, skill to adjust, diplomacy, etc.

As mentioned by teacher A. Gulbe (2010), a professional educator is the country's stability, economic development and public welfare cornerstone. The teachers and the education system of Latvia are competitive in Europe and worldwide. The profession of a teacher has a high prestige. It provides satisfaction and allows achieving personal and professional goals.

The growth of the teachers' professional competence, emphasizing the idea that competence is analyzed as a socio–pedagogical problem, is essential for educational process improvement. The concept of competence, its nature, content and formation conditions depend on a number of aspects, including the discussions about the awareness of human life value, about one's professional activity development, about understanding that a person himself/herself should be actively involved in the academic and practical process of professional educating.

The development of the teacher's competence is mainly manifested through his/her growth, choosing the strategy and analyzing one's practice. The educator's competence is divided as follows: personal competence or self–competence (loyalty, responsibility in certain the working situation, the ability to trust and be trusted, the ability to make independent decisions, etc.), the competence of process activities, management (readiness to take risks, mobility, flexibility, ability to manage resources, initiative, etc.), professional competence (professional knowledge of the occupation field, professional abilities, ability to plan work, professional skills for team work, professional ethics, etc.), social, interpersonal competence (communication skills, ability to argue, presentation skills, ability to establish cooperative relationships, ability to motivate, adaptability, etc.). The educator's professional competence problem becomes particularly important because of education humanization. The topicality of researching this problem is also determined by a number of contradictions in the learning process:

- contradiction between the teacher's developmental function and real capabilities, determined by his/her professional skills;
- contradiction between the teacher's tendency to develop professionally and insufficient knowledge of the types of development;
- adult education humanistic approach encourages personal development and aims at developing an individual with the ability of self–realization.

In recent years, the number of computer users has been rapidly growing. Computers are used not only at work, but also during free time. Development of new technologies and services facilitates a wider computerization. As the teacher at the same time has to know the use of computer and to be able to optimize the learning process in his/her subject, he/she needs both computer literacy and pedagogical proficiency (Kļaviņa, 2009). Thus, the teachers should be internally motivated and capable of acquiring knowledge continuously, which ensures systematic improvement of the necessary competences.

Competence should be independently developed; the author agrees with the idea of Maslo (2006) that the ability to develop one's competence depends only on a person – whether he/she wants to learn and develop his/her skills, whether it is interesting, whether he/she feels the necessity and attraction to learning. Thus, the ability to learn can be considered as the main structural component of competence, because competence is obtained through learning.

Materials and methods

In terms of the current study, the teacher's competence and the Home Economics and Technologies teachers' ICT competence is theoretically described. The research is done. The obtained data on Home Economics teachers' ICT competence, their ability to integrate the opportunities provided by ICT in teaching Home Economics and Technologies, which is necessary for ensuring a modern learning process, is summarized and analyzed. It is clarified, which ICT competences are needed for the teachers of the subject Home Economics and Technologies in comprehensive schools.

The study was carried out in Latvia University of Agriculture (LLU) in the Institute of Education and Home Economics (IMI) and ten different regional schools of Latvia were involved: Brocēni Secondary School, Cēsis State Primary School, Jelgava Gymnasium Nr.1, Līvu Primary school, Mārsnēni Primary School, Menģele Primary School, Olaine Secondary School Nr.1, Rāmuļi Primary

School, Striķi Primary School, Vecsaule Primary School. In expert assessment participated 12 Home Economics and Technologies teachers, aged 29–55, professionals in their field. The survey method used in the research is questionnaire; the essence of it is that the respondent should independently fill in a questionnaire that he has understood (Kristapsone, 2008).

Results and discussion

The teachers' ICT competence in Home Economics and Technologies classes.

Information age is associated with large changes in the teacher's work. The educator cannot avoid thinking about his/her work improvement, about the possibilities provided by the use of ICT in the learning process. His/her approach to this process is evaluated from two aspects (Birziņa, 2007):

- first, the teacher has to understand the sense of using ICT;
- the teacher has to be aware of his/her knowledge and skills required for the job.

Therefore, when using ICT, the teacher should not only to be aware of why and how to use the opportunities offered by the computer, but he/she has to be able to:

- apply technology for more efficient learning process, so that teaching and learning would be better;
- plan the work of individual students, groups and whole class;
- prepare and print the teaching materials, created by himself/herself;
- facilitate the use of ICT opportunities;
- organize the work in his/her subjects and increase his/her specialization, using ICT;
- engage in team learning on-site or distance learning.

Professional competence is one of the types of competences and it is specified according to a particular profession. A number of approaches are used for clarifying competence; T. Hoffman (Briede, Bīmane, 2010; Bīmane, Briede, Pēks, 2012) mentions four of them.

1. The first approach explains competence as "observable achievement or learning process outcomes". Achievements and results have to be measurable. This approach can be called behavioral.
2. The second approach concentrates on the quality and level of competence. T. Hoffman notes that this approach is very suitable for company's work. This approach focuses on determining work efficiency using the competence levels. Company's needs, plans, objectives and tasks determine the required competence levels. The second approach emphasizes the importance of adjusting company's development and the competence level requirements.
3. The main idea of the third approach is the development of personal qualities. Knowledge, skills and attitudes are evaluated. Each individual's contribution to a competent performance is important. The first two approaches mostly focus on the results of measurements. In the third approach, the process, individual's attitude and personality development are also important.
4. The fourth or mixed approach combines three above-mentioned approaches, however, it is the most complex one, and it requires, on the one hand, continuous effective activity, but on the other hand – providing opportunities for personal development.

In recent years, one of the most important issues for contemporary people sounds as follows: whether a school offers to their children the knowledge and skills, necessary for achieving success in the information age? The scientist S.C.Erhman (Erhman, 1996) has formulated three main points of ICT in education:

- improving the efficiency of the learning process;
- raising the quality of education;
- diversification and increase of the access to learning opportunities.

For the educator's ICT skills and competence development, it is needed to promote free use of technologies in different educational situations (Figure 1). ICT opportunities have stimulated the emergence of some new methods, new teaching materials and even new ways of learning, such as learning CDs and DVDs, electronic books, test developing programmes, e–learning and integrated collaboration environment.

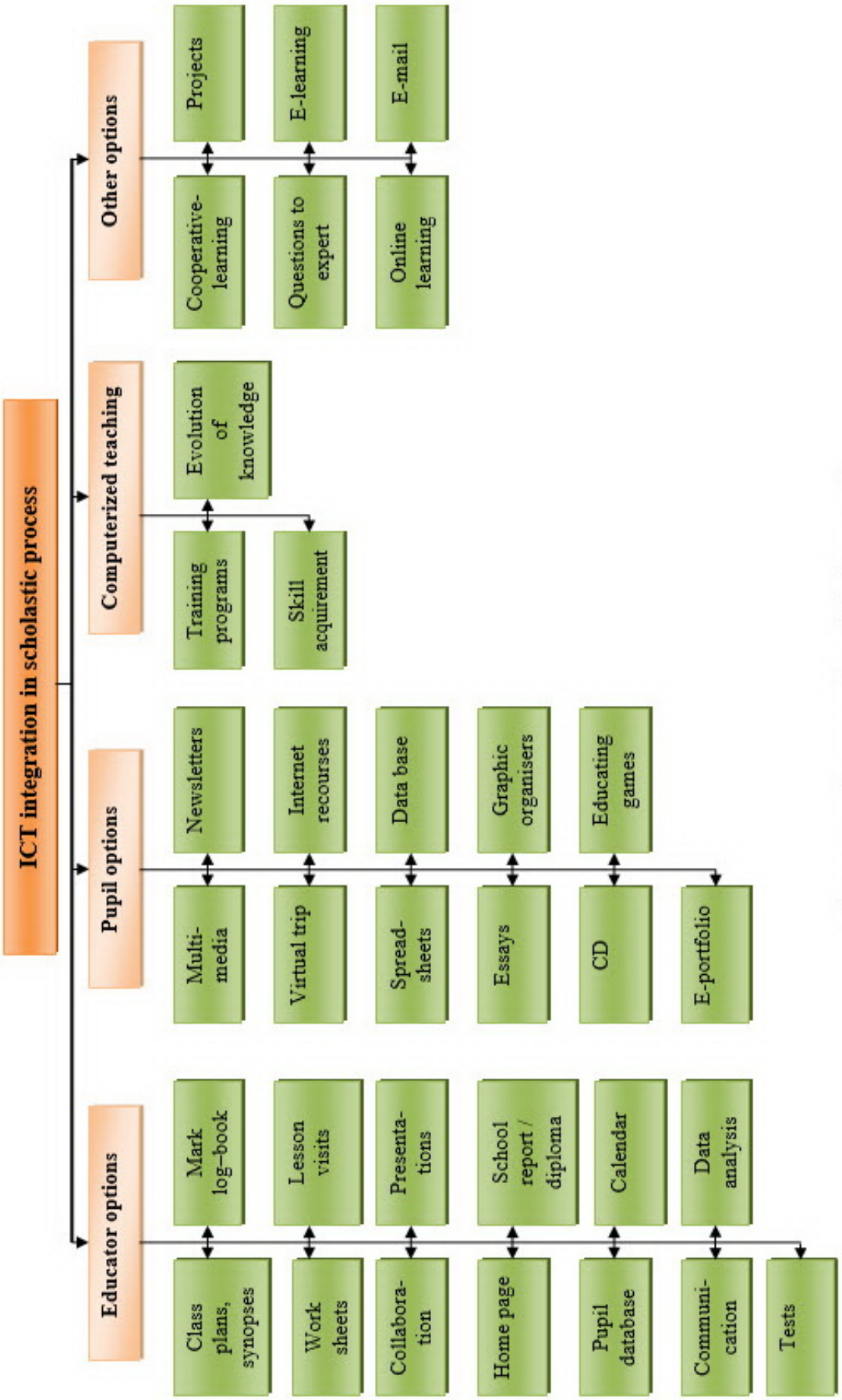

Figure 1. Teachers use of ICT (Birziņa, 2007)

Students' needs satisfaction is the basis of the work of any subject's teacher, including Home Economics and Technologies teachers. However, as it is known, the needs develop if there is an interest, if the work is exciting. The teacher has to be able to develop his/her own competence in order to adapt to professional and human requirements that are set for a contemporary educator.

Teacher M.Ignatjeva (2007) has highlighted the educator's skills that are relevant in the information society; the ability to work with information technology has also been mentioned among others:

- ability to cooperate, to work with colleagues;
- ability to work with sources of information, technology and news media;
- ability to use IT facilities, to integrate knowledge, to develop understanding of teaching and learning productivity;
- ability to develop students' skills for working with various sources of information;
- ability to use IT to enrich the knowledge for new learning situation modeling.

Clarifying computer literacy and computer competence requirements, it is also important to know how to identify and evaluate the professional competence in using computer. One solution is to apply European Computer Driving License (Eiropas datorprasmes..., 2014). European Computer Driving License (ECDL) certificate verifies that:

- its owner knows the basic concepts of information technology;
- its owner has the basic skills in using computer hardware and core applications.

Considering on the role of ICT in the learning process, where it functions as a tool and creator of the learning environment, the teacher should have computer literacy knowledge, in order to use ICT both in preparing for lessons, as well as for integrating it in the lessons. These two aspects are related to ICT knowledge and skills acquisition, but being aware of the fact that the integration of ICT requires from the teacher a change in the teaching methods, the third aspect, i.e. the teacher's pedagogical knowledge, is also important. The teacher has to pay attention to these three aspects during further education process, for his/her competence enforcement.

V.Dislere stresses the necessity of using ICT in teaching Home Economics, in order to modernize and expand learning opportunities, e.g. using e–environment options (Dislere, 2012). The following ICT competences are included in professional competences of the Home Economics teacher:

- has to use pedagogical technical elements;
- has to know the history of Home Economics education;
- has to be competent in the use of ICT;
- has to be competent in all topics of the subject:
  - cooking, sewed clothing manufacturing, material handling (including textile works), composition, woodworking and metalworking, electrical appliance and motor vehicle operation,
  - technical graphics;
  - consumer education: housing, food, clothing, safety, family finance, advertising, shopping art.
  - using modern household equipment and technologies;
  - arranging training workshops and organizing work appropriate to standards;
  - integrating the issues of learning the management of household, consumer science, mutual relationships in household, nutrition, clothing in Home Economics and Household subjects.

Home Economics and Technologies teacher may use ICT competence when teaching a variety of topics:

- specialized software WinKnit or Aran Paint can be used for developing knitting schemes;
- the programme PrimaVision Knit can create one's virtual knitted handicraft visualization;
- construction of main patterns for women's garment for upper or whole body can be done in the programme EBA, Pattren CAD or Grafis;
- embroidery schemes can be made in the programme Stitch Art Easy or Adobe Photo Shop;
- DB Weave, WeavePoint or BeadsWicker could be used for developing weaving products' schemes;
- the programme Astron Design can be used for furnishing virtual space;

- family budget planning can be made in the programmes Money Controller, SEB Budget Planner or CRPC Budget Calculator;
- crochet charts can be made in the programme MyCroche (Vronska, 2012).

The teacher plays an important role in the integration of ICT opportunities in the learning process; however, computer usage is not always successful. The authors (Fisher, 1991, Kosmidou–Hardy, 2003, Olgren, 2000) describe learning with computers as physical separation between the teachers and the students. The author of the article agrees with these authors that in computer-organized learning process one faces both positive and negative effects, and using any new technology is associated with learning "dehumanization", students' isolation, information overload. Therefore, it is important to balance the time to be used for working with computer programmes and time to be used for creating practical products manually.

Research results

When, many years ago, the author of the present work attended Home Economics classes in comprehensive school, she could only dream that teaching today's students will require specific competences for ensuring a modern learning process. In terms of the study, the author wishes to know, what is topical for a modern educator who is a professional in one's subject, and the respondents' assessment of the author's computer using skills. The survey consists of open-ended questions, in order to collect, evaluate the objective facts and to publish those for teaching quality improvement.

Results of the survey are obtained from respondents' answers to thirteen questions, of which:

- eight closed questions;
- four semi–closed questions;
- one open question.

Table 2

Survey expert assessment of the author's teacher ICT competence

The value of Kendall's W[a] coefficient 0,177 ≠0 (*Chi - Square*) χ_r^2 – 12,359 Kendall's (*Asymp. Sig.*) $\boldsymbol{p}$ – value 0,577					
	1	**2**	**3**	**4**	**5**
How pleased are you with test creation tool for the educator needs?					
Ability to set password	-	-	-	1	4
Execution time limitation	-	-	-	1	4
The ability to use additional features for each question	-	-	-	-	5
View of correct answers	-	-	-	1	4
Evolution compilation	-	-	-	-	5
Evaluate use of test:					
Question adequacy on specific topic	-	-	-	1	4
Understanding of question	-	-	1	1	3
Are you pleased with use of imagery:					
Quantity	-	-	-	1	4
Quality	-	-	-	1	4
How would you rate the overall of test in subject "Home Economics and Technologies"					
Your total evaluation on test	-	-	-	-	5
Master students ICT competence?					
Is able to work with applications	-	-	-	-	5
Is able to work with graphic applications	-	-	-	-	5
Is able to work with multimedia technique	-	-	-	-	5
Is able to use E- environment tools	-	-	-	-	5
Is able to make verification tests in E–environment	-	-	-	-	5

The survey open type question for Home Economics and Technologies teachers is: What problems have you faced in the organization of the learning process, using ICT in Home Economics and Technologies subject? The quotes from the teachers' responses are as follows:

1. Too little time available for the subject (only 1 hour a week).
2. The lack of hardware.
3. Low level of ICT skills.
4. Equipment does not correspond to modern requirements.
5. Low level of foreign language knowledge.
6. Expert assessment value analysis.

Kendall's W test p–value of 0.177 indicates that the expert evaluation is not unanimous (Table 2). The author's ICT competence was evaluated with the highest rating by all experts. However, test imagery quantity and quality, view of correct answers, execution time limitation and ability to set passwords created by the author, was evaluated with 4 points by one expert. Understanding the test question was evaluated as "completely satisfactory" by 3 experts, as "satisfactory" by 1 expert and as "almost satisfactory" by 1 expert. The average rates of test development tools for the subject are presented below (Figure 2).

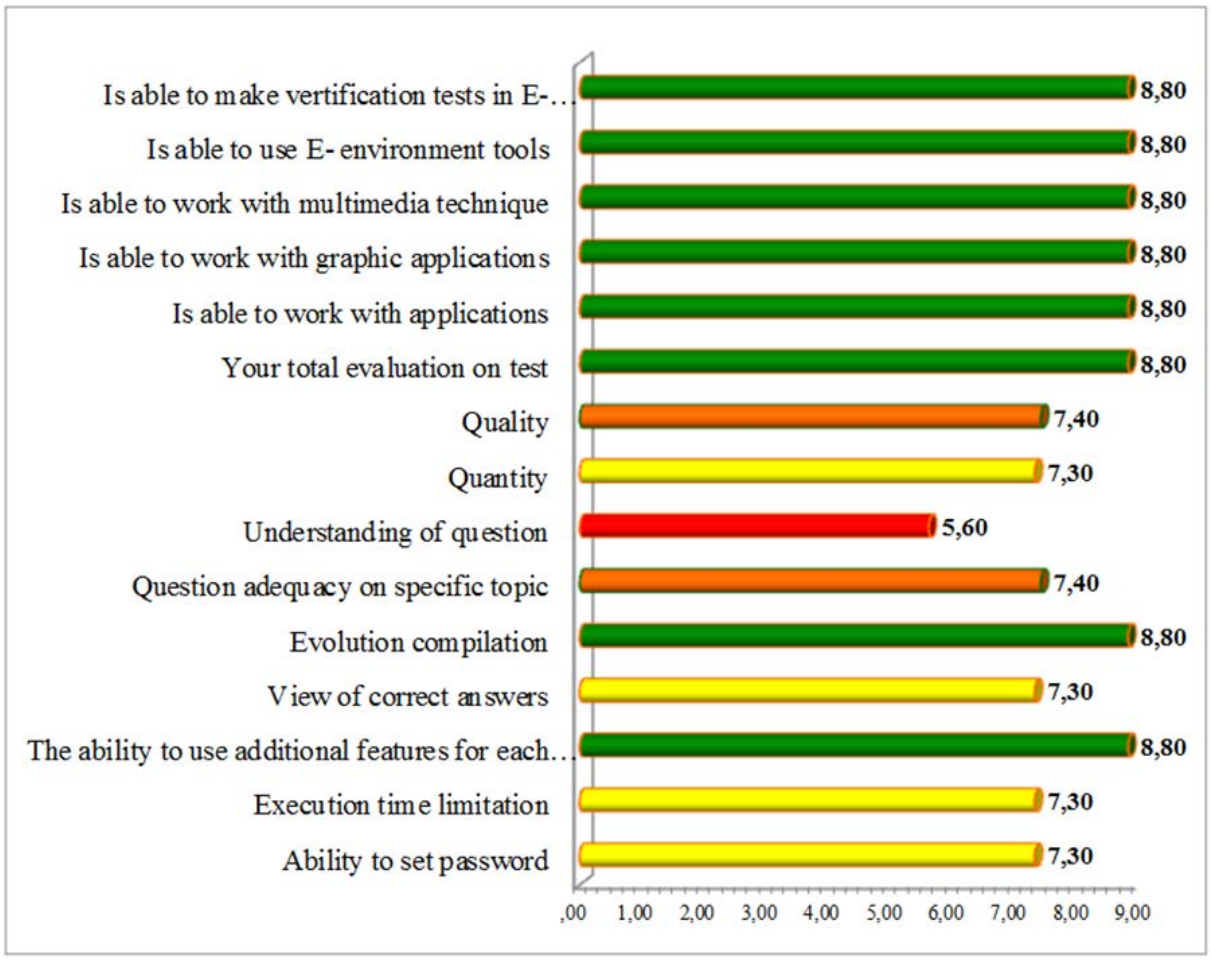

Figure 2. Survey expert assessment of the author' educator ICT competence.

The use of technology provides a variety of new benefits, such as using computer as a source of information and communication, personal opportunities' expansion, gaining new knowledge and skills, as well as broadening experience, considering the use of ICT as getting certain independence.

In collaboration with the school teachers, the author of the present works has heard positive feedback about further education, expressed during the interview on education. The summarized results of the teachers' answers to the question: "Do you want to enhance your existing ICT competence?" show

that one respondent does not want it, one respondent has not thought about it, while 10 respondents are fully convinced of the need of their ICT competence improvement.

Contemporary Home Economics and Technologies teacher has to be ICT competent, as computer skills corresponding to ECDL requirements should be mastered by every school leaver – for elementary school in a narrowed way, but for the rest of graduates – in full. ICT for concrete specialties should be acquired in the educational institution, where one acquires the profession itself – at the university, college or vocational training schools.

Conclusions

- The teacher's competence is characterized by such components as competitiveness in the labor market; inborn abilities; the ability to manage the learning process; proficiency; the ability to organize oneself for further education; learning ability, the ability to use experience. The educator should also have specific competences in working with the younger generation. While using ICT in Home Economics and Technologies classes, computer technology can be used both as a means of learning, when learning "with computer", and as learning environment – learning "from computer", thus improving learning, productivity and performance. In present century (Information and Knowledge century), the requirements actualize the need for self – education, self – development that would provide better job opportunities and higher life quality, as well as the need for a personal challenge – to realize one's potential, to develop oneself in a personally meaningful way.
- The teacher's abilities which are relevant in information society:
  - ability to cooperate, to work with colleagues;
  - ability to work with sources of information, technology and news media;
  - ability to use IT facilities, to integrate knowledge, to develop understanding of teaching and learning productivity;
  - ability to develop students' skills for working with various sources of information;
  - ability to use IT to enrich the knowledge for new learning situation modeling.

  As the teacher at the same time has to know the use of computer and to be able to optimize the learning process in his/her subject, he/she needs both computer literacy and pedagogical proficiency. Thus, the teachers should be internally motivated and capable of acquiring knowledge continuously, which ensures systematic improvement of the necessary competences.
- Kendall's W test p–value of 0.177 indicates that the expert evaluation is not unanimous. The author's ICT competence was evaluated with the highest rating by all experts. However, test imagery quantity and quality, view of correct answers, execution time limitation and ability to set passwords created by the author, was evaluated with 4 points by one expert. Understanding the test question was evaluated as "completely satisfactory" by 3 experts, as "satisfactory" by 1 expert and as "almost satisfactory" by 1 expert.

Further suggestions:

- Continuous professional development for teachers; it is preferable to confirm their ICT competence with ECDL certificate.
- The key to success for any teacher including Home Economics and Technologies teacher is holding a dialogue with the students, which is the basis of successful cooperation.
- Young ICT competent teachers should support the transfer of computer skills to the older colleagues taking into account that their experience in the new technologies field is smaller.

Bibliography

1. Birziņa R. (2007). Humānistiskā pieeja pieaugušo datorpratības izpētē (A humanistic approach to research about adult computer literacy). Pomocijas darbs (Doctoral Thesis). Rīga, LU, 193 lpp. (In Latvian)
2. Bīmane I., Briede B., Pēks L. (2012). Exemplary studies as ameans of development of students'professional competence in the course of geodezy. Proceedings of the International

Scientific Conference, *Rural Environment. Education. Personality* (REEP), Dišlere V. (Ed), Volume 5. Jelgava, Latvia, LLU, pp. 111–118.
3. Briede B., Bīmane I. (2010). Profesionālās kompetences veidošanās LLU un RTU studentiem ģeodēzijas studiju kursā (Development of professional competence in the study course geodesy for students of LLU and RTU). Geomatics. Scientific Journal of Riga Technikal University. 46.-50.lpp. (In Latvian)
4. Dislere V. (2012). Methodology Structure for Training Teachers of Home Economics and Technologies. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality* (REEP), Dislere V. (Ed), Volume 5. Jelgava, Latvia, LLU, pp. 201–208. [online] [03.12.2014]. Available at http://llufb.llu.lv/conference/REEP/2012/REEP-2012-proceedings-E-ISSN-2255-808X.pdf
5. *Eiropas datorprasmes sertifikāta (ECDL) programma* (2012). (European Computer Driving Licence (ECDL) program). [online] [03.12.2014]. Available at http://www.ecdl.lv (In Latvian)
6. Erhman S.C. (1996). *Information Technology and the Future of Post-secondary Education*. Paris, Organization for Economic Cooperation and Development.
7. Erpenbeck J., Scharnhorst A. (2005). *Metakompetenzen und Kompetenzentwicklung*. Schriften zur beruflichen Weiterbildung (Development of competence and metacompetence. Steps for professional development). Heft 95/Teil I., Berlin, 208 p. (In German)
8. Fisher M. (1991). *Computerphobia in adult learners*. Computer Education, pp. 14–19.
9. Gulbe A. (2010). Olimpiskās izglītības inovatīvs apguves modelis sporta pedagogu profesionālās kompetences pilnveidei (Olympic education innovative learning model for development of sports teachers' professional competence). Promocijas darbs (Doctoral Thesis). Rīga: LSPA, 155 lpp. [online] [03.12.2014]. Available at http://www.lspa.eu/files/research/theses/A.Gulbe/Promocijas_darbs.pdf (In Latvian)
10. Hutmacher W. (1996). *Key Competences for Europe.* Report of the Symposium. Berne, Switzerland, 72 p.
11. Ignatjeva M. (2007). Informācijas tehnoloģiju izmantošanas iespējas (The possibilities of use of information technologies). *Skolotājs* (Journal Teacher). Nr.1, Rīga, Latvia 36.– 40.lpp. (In Latvian)
12. *Izglītības attīstības pamatnostādnes 2007.–2013.gadam* (2006). (Guidelines for the Development of Education from 2007 to 2013). [online] [03.12.2014]. Available at http://izm.izm.gov.lv/normativie-akti/politikas-planosana/1016.html (In Latvian)
13. Kļaviņa M. (2009). Informācijas un komunikācijas tehnoloģijas skolēnu pozitīvu attieksmju pret mācību priekšmetu Mājturība un tehnoloģijas veicināšanai (Information and communication technologies for promotion of students positive attitude towards the study subject Home Economics and Technologies). Maģistra darbs (Master Thesis). Jelgava, LLU, IMI, Latvia,146 lpp. (In Latvian)
14. Kosmidou–Hardy C. (2003). Heuristic teaching: A model of critical Education Berlin European Media Literacy Conference II – 2003: „Learning Democracy", Conference paper, 44 p.
15. Kristapsone S. (2008). Zinātniskā pētniecība studiju procesā (Scientific research in the study process). Rīga, SIA „Biznesa augstskola Turība", Latvia, 352 lpp. (In Latvian)
16. Latvijas ilgtspējīgas attīstības stratēģija līdz 2030 gadam (2010). Latvijas Republikas Saeima. [online] [03.12.2014]. Available at http://baltadaba.lv/wp-content/uploads/2013/04/latvija2030_lv.pdf
17. Maslo E. (2006). Kompetences veidošanās savas mācīšanās izpētes procesā (Development of competence in own learning research process). *Skolotājs* (Journal Teacher). Nr.2, 49.-51.lpp. (In Latvian)
18. Maslo I., Tiļļa I. (2002). Skolotāju kompetences izpratne teorijas un prakses vienotībā (Understanding of teacher competence in the unity of theory and practice). *Skolotājs* (Journal Teacher). Nr. 4, 8.–14.lpp. (In Latvian)
19. *New Skills for New Jobs: Action Now* (2010). A report by the Expert Group on New Skills for New Jobs prepared for the European Commission. European Union.[online] [03.12.2014]. Available at http://ec.europa.eu/social/BlobServlet?docId=4508&langId=en

20. Olgren C.H. (2000). *Learning strategies for learning technologies.* In E.J. Burge (Ed.) The strategic use of laerning technologies. New directions in adult and continuing education. San Francisco, Jossey – Bass, pp. 7 – 16.
21. Rauhvargers A. (2004). *Veidojot kvalifikāciju ietvastruktūru Latvijas augstākajai izglītībai* (Creating qualifications framework for Latvian higher education). Darba dokuments Latvijas mēroga diskusiju uzsākšanai (Working document for starting Latvian scale debate). 2004.gada augusts – 2005.gada janvāris, 26.lpp. (In Latvian)
22. *Skaidrojums par Eiropas kvalifikāciju ietvastruktūru mūžizglītībai* (Explanation of the European Qualifications framestructure for lifelong learning). (2008). Eiropas kopiena (European Community), 16 lpp. [online] [03.12.2014]. Available at https://ec.europa.eu/ploteus/sites/eac-eqf/files/brochexp_lv.pdf (In Latvian)
23. Tiļļa I. (2005). Sociālkultūras mācīšanās organizācijas sistēma (Organization system of socio-cultural learning). Rīga, RaKa, Latvia,295 lpp. (In Latvian)
24. Vronska N. (2012). Topošo skolotāju informācijas un komunikācijas tehnoloģiju integrēšanas prasmju attīstība mājturības un mājsaimniecības izglītībā (Development of prospective teacher information and communication technologies integration skills in household and Home economics education). Promocijas darbs (Doctoral Thesis). Jelgava, LLU, Latvia, 163 lpp. (In Latvian)
25. Никишина И.В. (2007). *Иновационная деятельность современного педагога* (Innovation activities of the modern teacher). Волгоград: Учитель, Russia, 93с. (In Russsian)

The Evaluation of Students' Determination in Vocational Schools

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Abstract: One of the strategic goals of vocational education is increasing its quality and competitiveness. Therefore, when training the students of vocational schools for work in the chosen profession, a particular attention is paid to the development of their intentional determination. The purpose of the article is to evaluate factors concerning the development of determination of vocational school students and to evaluate the possibilities of promoting the development of intentional determination. Materials and methods: the theoretical method - the analysis of scientific literature; the empirical method – student surveys. The data processing software SPSS and Excel have been used for the analysis of the data. Results: the article deals with a closer analysis of theoretical approaches concerning the development of determination in individual's life activity and the data obtained as a result of surveying the students of several vocational schools. There have been singled out the main factors affecting the development of determination in the pedagogical work. Conclusion: With regard to the development of determination, it is very important that students understand learning as the process personally relevant to themselves; they create their self-experience where learning obtains personal meaning.

Keywords: vocational education, determination, motive, self-realization.

Introduction

The contemporary society requires that each individual should be able to use their abilities, knowledge and skills, to be persistent, able to work and achieve their aims under the conditions of increased stress, to act in a well-considered way and maintain determination in one's life activity. Since the regaining of independence, the system of vocational education has undergone radical changes in Latvia. One of the strategic goals in the development of vocational education is the increase of its quality and competitiveness. Therefore, when training vocational school students in their chosen profession, a particular attention has to be paid to the development of intentional determination in the pedagogical process. The need to develop students' determination is underpinned by the economic situation in Latvia and issues concerning the entry of potential employees into the job market.

In reality, there is a contradiction between the strivings of vocational school students to attain their goals and the satisfaction for achieved results; as a result, young people cannot achieve their goals.

In the academic year 2012/2013, 32086 students were enrolled in vocational secondary schools in Latvia, while only 9473 people completed their studies. According to the statistics, 5465 students dropped out of the institutions of vocational education (Statistika par..., 2015).

It has to be noted that individuals' level of education and their acquired competencies: knowledge, skills, attitudes and the ability to use them are the key factors that ensure competitiveness in the global labour market (Bikse, 2009, 5). However, it is equally important to understand that one's satisfaction with life, success and the feeling of happiness depend on the goals an individual has set for himself/ herself and the ability to attain these goals.

With regard to vocational school students, the development of determination is affected by several factors: their upbringing, the attitude of educators and peers, school results and student's own activity. Studies concerning the life goals of young people and their assumptions about the expected results, vocational interests and the career development goals, youth determination, work during the leisure time, educational success and career development show the interconnection between determination and motivation (Bernande, 2013; Caughlin, 2010;Katane, Kalniņa, 2010; Jurgena, Gedrovics 2011; Jurgena, Gedrovics, Cedere, 2014).

The awareness of one's goal stimulates individual's activity, particularly in the situation when the goal becomes the motive of student's activity. Therefore, it is important to take into account not only the objective meaning of the goal, but also its subjective sense.

The purpose of the article is to evaluate the factors concerning the development of determination among vocational school students in Latvia and the possibilities of promoting the development of intentional determination.

Methodology

The methodological foundation of the article is based on the ideas concerning individual's activity and the essence of life activity (Леонтьев, 1975, 2005; Рубинштейн, 1989/2004; Ильин, 2000), goal theory (Рубинштейн, 1989/2004; May, 1989; Ильин, 2000), attitude theory (Леонтьев, 1975, 2005)

The analysis of literature leads to the conclusion that the life path project and its implementation is the goal function of life activity (Абулъханова-Славслая, 1991); the goals, means and products (Василюк, 1984).

With regard to the promotion of youth determination, Rubinstein's (Рубинштейн, 1989/2004) idea about the interconnection between will and the goal and the progression from external to internal control is very important. Will does not result directly from needs, but rather from the awareness of motives and the goal as their result. The goal itself is the dominant of stimulus. The regulation of activity by means of willpower is conscious, and is strengthened by goals and motives. That is why, determination is defined as the most important feature of individual's will, which manifests itself as the ability to set and achieve goals (Леонтъев, 2007; Майерс, 1998). Within the aspect of life activity, the goal can be analysed as a structural component of activity, as the component of sense and the component of life activity. When defining the goal, the idea concerning the goal as an intentional motive and task is of key importance (Леонтъев, 2007, 252). The aim of activity is the connection between a subjective need and an idea of what is necessary to satisfy this need (Рубинштейн, 1989/2004); the predicted/ expected desirable or achievable result of activity; the goal expresses the result of any activity and characterises the content of human life (May, 1989).

Determination is defined as the most important quality of human will, which manifests itself as the ability to set goals and achieve them. Determined people can understand the situation and analyse their motivation and needs independently and profoundly, and are able to adapt their desires to their knowledge, skills, abilities and possibilities (Bernande, 2013, 18).

The development of youth determination is connected with three stages of self-regulation: the choice of the goals, the stimulus to take action in order to reach the desirable goal, and monitoring one's progress towards achieving the goal (Meissner, 2009).

The factors promoting the determination of personality both in education and in other areas of life activity can be diverse: the ability of the personality to understand and set the goal, which is connected with initiative (Bundick, 2009); self-regulation, which is connected with undertaking responsibility for one's actions and is ensured by adequate self-confidence (Bandura, 1977, 1989, Рубинштейн, 1989/2004); the use of appropriate means for achieving one's goals (Yeager,Bundick, 2009).

It has to be noted that teacher's assistance is an essential factor in developing students' awareness of their goals and goal-setting skills (Gudjons, 2007). There is a connection between determination and motivation, which is shown by studies concerning the life goals of the youth and their notions about expected results, vocational interests and career development goals (Hirschi, 2010; Jurgena, Gedrovics, 2011). On the other hand, motivation as a factor promoting determination is closely linked with attitudes. Attitudes manifest and perfect themselves in the process of satisfying needs and activity aimed at achieving goals in accordance with the possibilities in particular social conditions. Attitudes are seen in one's actions and behaviour.

The analysis of the theoretical literature led to the conclusion that for the development of determination it is important to evaluate students' abilities to be aware of the goal of their activity, to set goals and choose the means for achieving them, to use these means appropriately and to stimulate

the need to achieve the goals.In the institutions of vocational education, the development of determination could be promoted if students are aware of and understand competent learning, which manifests itself as student's ability and skill to choose an appropriate learning strategy corresponding to a particular learning situation (Figure1).

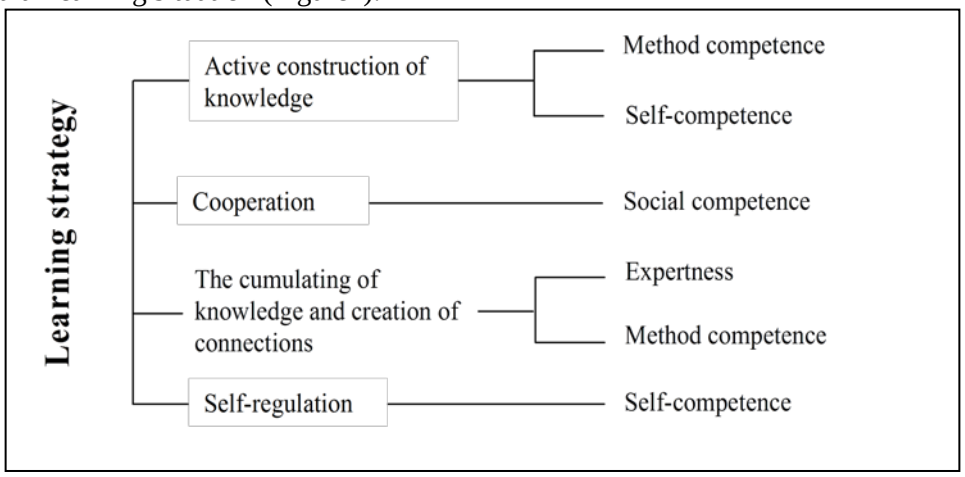

Figure 1. The model of competent learning (Kāposta, 2012).

The process of learning is connected with direct and reflexive relationships, which manifest themselves in the active interconnection between the learner and the teacher. This interconnection is based on common goals: to teach and to learn. If a student has the aforementioned components that facilitate determination: the meaning of life, attitudes, will, needs, motivation, the goal, it can be assumed that there will take place a purposeful process of learning, and determination will be promoted in this process.

Learning, being student's cognitive activity, promotes not only his/her intellectual, emotional, volitional and physical development as well as the cognition of the diversity of reality, but it also forms various social attitudes and creates the experience of self-cognition and self-realization . Educational and personal success are criteria promoting determination.

The empirical study was based on students' survey by means of a questionnaire containing closed questions. The sample of the survey included 282 respondents from five Latvian vocational secondary schools (Table 1). The average age of the respondent is 18.5.

Table 1

The characteristics of the respondents

No	School	The number of students					
		Girls		Boys		Total	
		N	%	N	%	N	%
1	Valmiera Vocational School	171	60.6	73	63.5	244	57.7
2	Smiltene State Technical School - vocational secondary school	50	17.7	13	11.3	63	12.6
3	Limbaži Vocational School	31	11.0	11	9.6	42	10.6
4	Jaungulbene Vocational School	8	2.8	7	6.1	15	3.8
5	Kuldīga Vocational School of Technologies and Tourism	22	7.8	11	9.0	33	8.3
	Total:	282	100	115	100	397	100

The statistical data processing was done by means of the software SPSS (version 19) and Excel.

Results and discussion

Determination is the basis of individual's life activity and ensures success both in the educational institution and outside it, as well as in one's further life activity. The development of determination is based on the goal of life activity, whose function is individual's own life path plan and its implementation.

The analysis of the results of the survey shows that, generally, vocational school students are quite determined – the mean values of the responses referring to respondents' understanding of the goal of their activity and their ability to achieve it are above average; in the three-point scale M = 2.25 - 2.48 (Table 2). The students believe that generally they are aware of the goal of their activity, are able to set it and choose appropriate means for achieving their goals, and to use these means rationally. The most frequently chosen value (Mode 2) indicates that most students have a neutral understanding of their goal.

Table 2

Students' understanding of determination (1 ≤ M ≤ 3)

No	The theme of the question	M	Mode	SD
1	The awareness of the goal	2.39	2	0.520
2	The ability to set the goal	2.32	2	0.521
3	The ability to choose the means for achieving the goal	2.25	2	0.547
4	The ability to use the means in order to achieve the goal	2.32	2	0.523
5	The need to achieve the goal	2.48	3	0.530

a = 0.95

The division of the answers to these five questions in accordance with the Likert scale with three possible response values (1 – I cannot do it/ I am not aware/ there is no need; 2 – occasionally I can do it/ occasionally I am aware/ occasionally there is a need; 3 – I can always do it/ I am always aware/ there is always a need) shows that only 2% of the students surveyed admit their ignorance concerning determination and their inability to choose and use the means for achieving their goal, and the number of those who believe that it is not important at all to try to attain any goal is even smaller (1.4%) (Figure 2). Taking into account the dominant mean value M = 2, it can be inferred that part of the vocational school students do not really understand the meaning of the notion *goal* in life activity and have not really thought about purposeful activity so far.

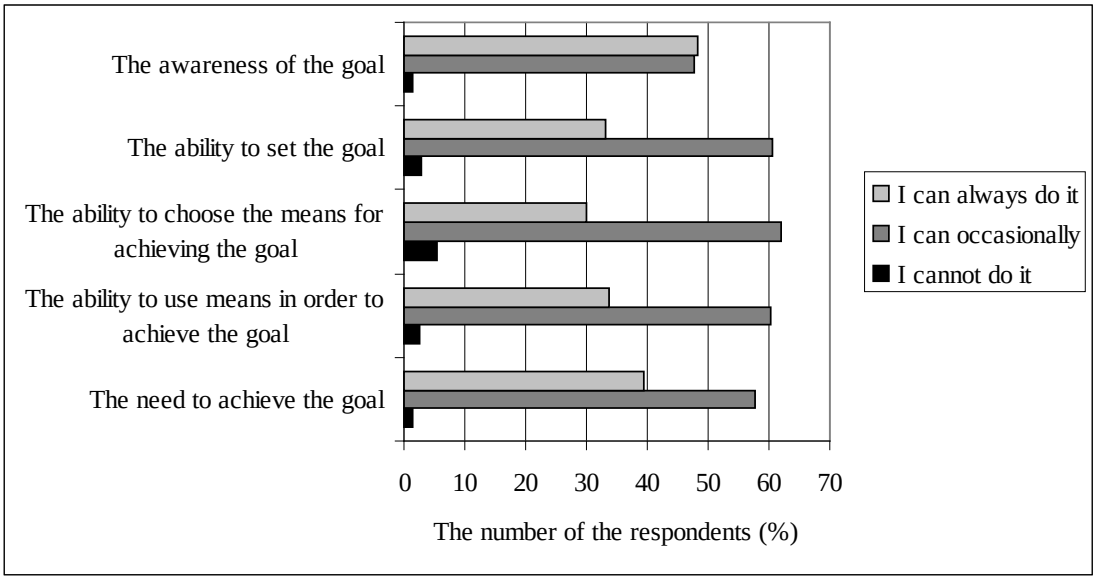

Figure 2. The division of the respondents (%) depending on their understanding of the goal.

95.4% of the respondents evaluate their school results as good or satisfactory. In order to assess the validity of the difference between two mean values in two independent groups, there was used a t test.

Using this method, it was not possible to determine significant differences in respondents' answers depending on the level of their school marks. When answering to the question: *Which statement characterises your achievements at school best of all?*, one out of four respondents (24.7%) consider achievement to be a pleasant coincidence; 35.5% state that achievement resulted from the process of work, and only one in four (26.3%) believe that achievement has been purposefully planned. Thus, a significant number of the students are not aware of the process of learning as an activity personally significant for them.

Some questions included in the questionnaire reveal students' ability to act in non-standard situations or in the case of failure as well as their knowledge concerning the opportunities of developing their future career (to show determination). When answering to the question: *What prevents you from achieving better results at school?*, a surprisingly large number of the respondents (30.2%) admit that it is laziness (Figure 3). This response does not indicate readiness for purposeful activity.

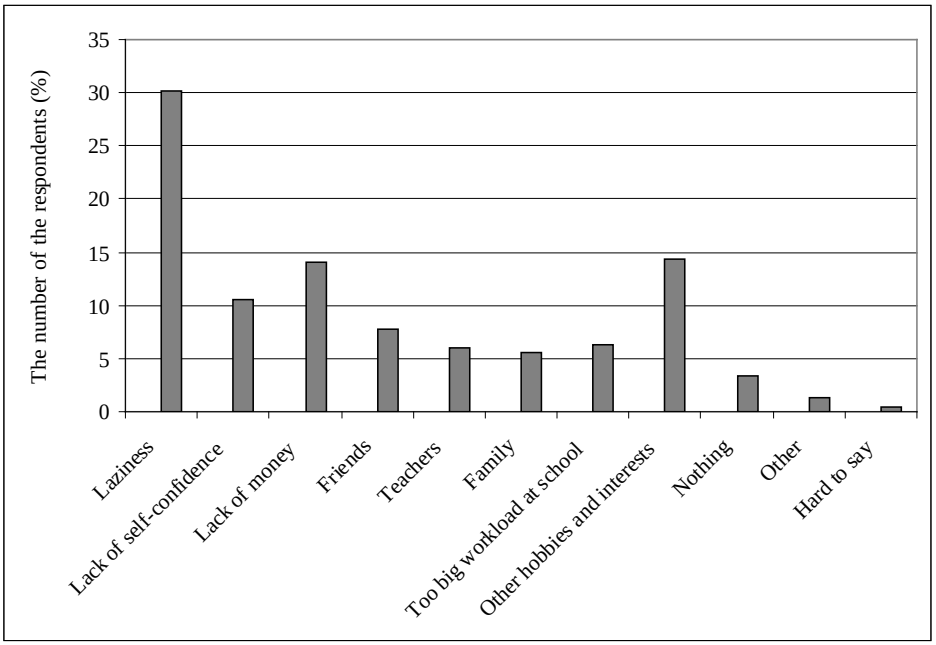

Figure 3. The division of the responses to the question: What prevents you from achieving better results at school?

With regard to the question *How are you searching for the direction of activity for your future success?*, the responses where very different: only 6.0% of the respondents mentioned reading specialist literature as the main factor; 12.6% and 23.9% respectively mentioned consulting specialists or relatives, while one third (29.5%) marked involvement in social activities. Almost one student in five (17.9%) believe that it is necessary to rely on intuition, chance and coincidences. A small number of the respondents (2.5%) believe that no purposeful planning is needed.

In order to determine whether there are differences between the responses of boys and girls, there were formed two independent groups – girls and boys. By means of the t test it was determined that there are no significant differences in the mean values of the answers to most questions. For instance, both groups have similar results at school: 48% of the girls and 46% of the boys consider their results as satisfactory, while 49% of the girls and 48% of the boys rate their marks as good. Similarly, the majority of the respondents in both groups (56.4% and 55.7% respectively) admit that sometimes they cannot control their emotions, and only 37.9% of the girls (36.5% of the boys) believe that they can control their emotions.

There are statistically significant differences in the responses to the question concerning one's possibilities (*How do you rate your possibilities?)* ($t = 2.280$; $p < 0.05$; $M_g = 2.48$; $M_b = 2.31$), where it appears that the girls look at their future with more optimism and confidence than the boys. Similarly, with regard to educational achievements, girls rate higher the importance of personal abilities and talents; there is a statistically significant difference in responses to this question ($t = 2.031$; $p < 0.05$;

M_g= 2.66; M_b= 2.54). It is worrying that only a half of the respondents are optimists, and one respondent in ten looks at the future with fear and pessimism.

There are also differences in the views of girls and boys how they would act in the case of (Figure 4). Compared to the boys, the girls re more focused on trying to find the causes, while the boys tend to search for another solution. By means of Pearson Chi Square test, it has been determined that the division of the responses is significantly different (χ^2 = 15.047; df = 7; p < 0.05).

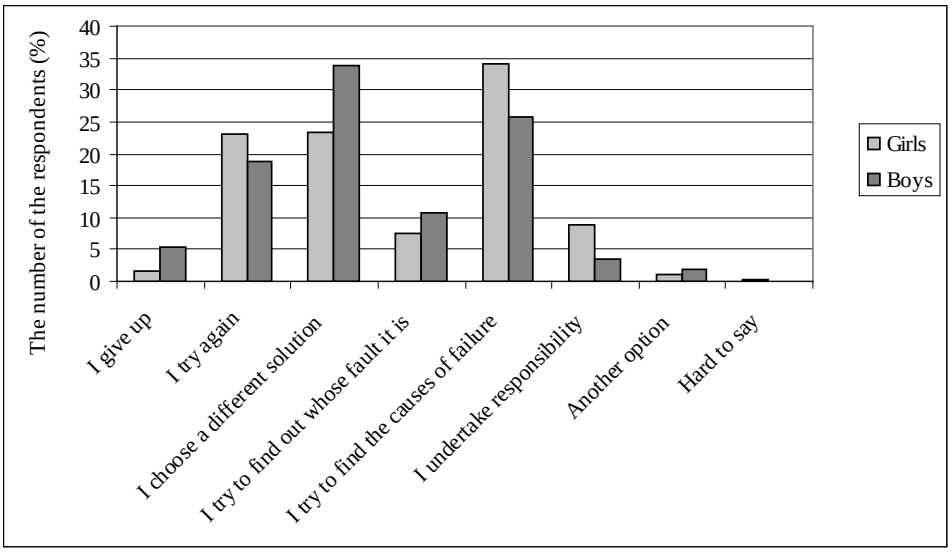

Figure 4. The division of the responses to the question *How would you act in the case of failure?*

Generally, the role of school in students 'development is rated positively (M = 2.21 – 2.27); within the context of this survey, it means that the institutions of vocational education involved in the present study care about developing students' determination and the training of young competitive specialists. In this question, there is no significant difference between the responses of the girls and the boys (χ^2 = 17.450; df = 12; p > 0.05).

On the generally quite similar background of the responses given by the girls and the boys, there can also be seen some gender specific nuances: compared to the girls, the boys give higher ratings to the role of the school in the development of independence and responsibility; on the other hand, they rate the role of the school in the development of skills related to setting goals and achieving them lower than the girls.

The study also revealed that in several questions the differences in the responses given by the girls and the boys is a topical issue, which has to be taken into account in further studies. Other important factors are the mutual relations between students and teachers and their cooperation, which were not included in this article.

Conclusions

Determination as a general psychological personality feature is forming and developing in the self-regulation and self-realization process of vocational school students.

In order to promote the development of determination among vocational school students, it is necessary to single out and evaluate factors which facilitate determination: the need to achieve the goal, the awareness and setting of the goal, the choice of the means for achieving the goal, the ability to use the means corresponding to a particular situation in order to achieve the goal, the development of a concrete plan of future life activity and the implementation of this plan. It was determined in the present study that these skills are not high, but most of the students are aware of the necessity of determination in their activity. Overall, students' answers are neutral because among the 1st year students, who constituted the majority of the sample, the determination skills are still developing.

30% of the respondents mention laziness as the factor preventing them from achieving better results at school – it is an important indicator, which shows that it is necessary to pay more attention to the development of students' willpower in the pedagogical process.

Students need knowledge of promoting the development of determination, the awareness of the choice of their life goal and the possibilities of achieving it. Developing determination in the process of learning at the institutions of vocational education is one of the key opportunities that develop students' self-regulation skills and promote the development of self-confidence and self-esteem.

There are differences in the responses given by the girls and the boys, which educators have to take into account in the organization of the process of learning adapting the methods of education and learning to gender differences and trying to provide maximum opportunities for students 'self-realization as the basis for their further successful life activity.

With regard to the development of determination, it is important that students understand the process of learning as a process important for themselves; in that way; they are developing their self-experience, where learning is becoming personally relevant for them. The data of the study show that a significant number of the respondents (about one in four) are not aware that the process of learning is an activity personally relevant for them.

Bibliography

1. Bandura A. (1989). *Social Foundations of Thought and Action: A Social Cognitive Theory*. New Jersey Prentice-Hall, Englewood Cliffs, pp. 617, ISBN 0-13-815614-x.
2. Bandura A. (1977). Self-a Unifying Theory of Behavioural Change. *Psychology Review*, Vol.84 (2), pp. 191-215.
3. Bernande M. (2013). *Jauniešu mērķtiecības un sasniegumu veidošanās mijsakarības dzīvesdarbībā* (The Interrelation of Youth Purposefulness and Achievement Formation in Life Activities). Promocijas darbs. Rīga, RPIVA. 180 lpp. (In Latvian)
4. Bikse V. (2009). Pētījums *Latvijas progress uzņēmējdarbības izglītības attīstībā pēc iestājas Eiropas Savienībā* (Latvian Progress in the Development of Commercial Eduction after the Accession to the European Union). Rīga, Latvijas Universitāte, Ekonomikas un vadības fakultāte, Eiropas Komisijas pārstāvniecība Latvijā. 47 lpp. [Online] [06.01.2015]. Available at http://s3.amazonaws.com/politika/public/article_files/1268/original/Bikse_EK_Petijums_09.pdf?1328195157 (In Latvian)
5. Caughlin J. P. (2010). A multiple goals theory of personal relationships: Conceptual integration and program overview. *Journal of Social and Personal Relationships*, Vol. 27, No.6, pp. 824-848.
6. Gudjons H.(2007). *Pedagoģijas pamatatziņas* (Basic Ideas of Pedagogy). Rīga, Apgāds „Zvaigzne ABC", 394 lpp. (In Latvian)
7. Hirschi A. (2010). Vocational Interests and Career Goals: Development and Relations to Personality in Middle Adolescence. *Journal of Career Assessment*, Vol.18, No.3, pp. 223-238.
8. Jurgena I., Gedrovics, J., Cedere, D. (2014). Students views on the professional career opportunities. *Engineering for Rural Development.* Proceedings of the 14th International Scientific Conference. Jelgava, LLU, pp. 522-528. [Online] [06.01.2015]. Available at
9. http://www.tf.llu.lv/conference/proceedings2014/Papers/89_Jurgena_I.pdf
10. Jurgena I., Gedrovics, J. (2011). The Views of Senior Form Students Regarding their Future Profession. *Society, Integration, Education. Proceedings of the International Scientific Conference.* Vol. 2, School Pedagogy; Lifelong Learning; Overviews, Rēzekne, Rēzeknes Augstskola, pp.189-199.
11. Katane I., Kalniņa I. (2010). *Skolēnu personības konkurētspējas attīstība neformālās komercizglītības vidē* (Development of Students Personality Competitiveness within the Environment of Non-Formal Commercial Education). Jelgava, LLU, 331 lpp.
12. Kāposta I. (2012). Kompetenta mācīšanās – mācību procesa kvalitātes nosacījums un līdzeklis. *Teorija praksei mūsdienu sabiedrības izglītībā.* VI starptautiskā zinātniskā konference (Competent Learning – the Precondition and the Means for the Quality of the Learning Process. The Theory for the Practice in Contemporary Education. The Proceedings of International

Scientific Conference) Rīga, Rīgas Pedagoģijas un izglītības vadības akadēmija, 147.–151. lpp. ISBN 978-9934-8215-9-2. (In Latvian)
13. *Statistika par profesionālo izglītību* (2015). Latvijas Republikas Izglītības un zinātnes ministrija. (Statistics on Vocational Education. The Ministry of Education and Science of the Republic of Latvia.). [Online] [06.01.2015]. Available at http://izm.izm.gov.lv/registri-statistika/statistika-profesionala/8597.html (In Latvian)
14. May R. (1989). *Love and will*. New York, London, W. W. Norton & Company, pp. 352.
15. Meissner W. W. (2009). Volition and Will in Psychoanalysis. *J. Am. Psychoanalytic Association*, 10(57), pp. 1123-1156. [Online] [06.01.2015]. Available at http://apa.sagepub.com/content/57/5/1123.refs
16. Yeager D. S., Bundick M.J. (2009). The Role of Purposeful Work Goals in Promoting Meaning in Life and in School work During Adolescence. *Journal of Adolescent Research*, Volume 24, No 4, pp. 423-452.
17. Абульханова-Славская К. А. (1991). *Стратегия жизни* (Life Strategies). Москва, Мысль, 299 с. (In Russian)
18. Василюк Ф. Е. (1984). *Психология переживания*. (The Psychology of Emotional Experience). Москва, 200 с. (In Russian)
19. Ильин Е. П. (2000). *Мотивация и мотивы* (Motivation and Motives). Санкт–Петербург, Питер, 508 с. (In Russian)
20. Леонтьев А. Н. (1975/2005). *Деятельность. Сознание. Личность* (Activity. Consciousness. Personality). Москва, Смысл, 346 с. (In Russian)
21. Леонтьев Д. А. (2007). *Психология смысла* (The Psychology of Meaning). Москва, Смысл, 368 с. (In Russian)
22. Майерс Д. (1998). *Социалъная психология* (Social Psychology). Санкт–Петербург, Питер, 688 с. (In Russian)
23. Рубинштейн С. (1989/2004). *Основы общей психологии* (Basics of General Psychology). Санкт–Петербург: Питер, 713 с. (In Russian)

Student Teachers' Perception of Teaching Competences' Development through Teaching Practice

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Abstract: Through teaching practice the student teacher should acquire several competences to be an effective and self-confident teacher. During teaching practice students should develop competences such as didactic competences, communication skills, leadership qualities. The aim of present study was to research student teachers' perception of teaching competences' development through teaching practice. The mentor role and duration of teaching training from students teacher view were also examined. The study was carried out by surveying 87 students from the 1st to the 4th grade. The sample consisted of student teachers without practical teaching experience (1st and 2nd grade) and student teachers with practical teaching experience (3th and 4th grade). The results revealed that the student teachers, who experienced practical teaching, on average evaluated their competence for different fields higher than students without teaching experience and that they more agreed that practical teaching training is more important for competence development, than theory. All student teacher also agreed that the practical teaching training is positively related of professional self-confidence. The results also revealed that student teachers want more practical teaching hours and that the student teachers with more practical teaching experience emphasised the role of the mentor more in terms of the qualitative analysis of their work than the student teacher without teaching experience.

Keywords: higher education, competences, home economics, practical teaching, student teachers.

Introduction

In recent years, in the field of teacher education, several studies have been made on global trends. One of them is a shift to a more practical-based approach (Moon, 2007). The fact is that student teachers also need, in addition to academic skills, practical knowledge on how to implement theoretical knowledge in practice. J. Loughran(2006) states that this can effectively be obtained only in a specific environment. F.A. Korthagen and J.P. Kessels (1999) noted that it is necessary to take into account the individual's perception of learning and teaching. They also believe that teaching is a complex process in which the teacher needs concrete and quick answers and that reflection on teachers owns work allows them to better understand their students' goals and needs.

Through teaching practice student teachers should achieved several with syllabus prescribed competences. The result of B. Malm (2009) research of teacher educators' opinions on competences that they considered to be essential to develop student teachers during their teacher education showed that for teacher educators it was very important to develop student teacher teaching skills, communication skills, leadership qualities and cognitive capacities, but interestingly competence: developing children's "self-confidence and personality" and so called "didactic competence" were not considered as being so important. M. Juriševič (Juriševič, Stopar, 2007) and colleagues stated that the competence model of education includes the following five fields of competencies that individuals can develop only in an authentic environment: didactic - methodical field, communications, the scope of creating a professional self-image, the scope of student self-regulation and educational management, core area of expertise.

Teaching practice on the subject Didactics of Home Economics in Slovenia occurred in the third year (two-week duration) and fourth year (two-week duration). Before the two-week teaching practice the student teacher must lead one teaching hour in the presence of a university teacher. Through the teaching practice, student teachers should develop several curriculum prescribed competences related to:

- professional knowledge (knowledge/ understanding of developmental differences and the needs of individuals).
- professional skills (practical work linked to teaching the lessons, management in specific

learning situations, the ability to critically evaluate and assess one's own work; the ability to form proposals for improving work, the value of continuous personal and professional development).

A.J. Hobson (2002, 5) research showed that "*student teachers consider mentoring to be a, if not the, key aspect of school-based initial teacher training"*. How effective the student teacher education will be depends, among others, on mentors. D.K. Cohen and H.C. Hill (2001) stated that teacher educating programs must provide meaningful context, structure of teacher's candidates learning experience and fully prepared mentors. The mentor can have several rules; the mentor can be source of information adviser and supporter (Hawkey, 1998).

This study aims to examine the student teachers' opinions on teaching competences development through teaching practice. The research questions were as follows:

- How practical teaching experience impacts the student teachers' perception of their professional competence.
- How student teachers evaluated the number of hours devoted to practical teaching.
- What student teachers expect from practical teaching training.

M**ethodology**

The research was conducted among 87 Home economics students from the 1st to the 4th grade. The student teachers were surveyed at the end of the winter courses; after the third and fourth grade students pass the obligatory teaching experience in the presence of a university teacher. The sample thus consisted of student teachers with practical teaching experience (TSPP) and student teachers without practical teaching experience (TSVP). The questionnaire contained questions related to (1) teacher students' opinion on the degree of competence achievement which can be obtained during teaching practice, (2) students' view of the impact of practical teaching experience to their self-confidence. Their attitudes were measured using a 7 point Lycart's scale, where 1- means strongly disagree and 7-strongly agree. The data was statistically processed with the Statistical Package for Social Science (SPSS). The frequency counts were run on all items. The dipper analyses involved a t-test where the significance level of $p < 0.05$ was used.

Results and discussion

Table 1 describes the socio-demographic characteristics of the students in the sample. The majority of the surveyed students were female; on average, 22.7 years old.

Table 2

The socio-demographic characteristics of the students

Variable	f	%
Gender		
Male	3	3.4
Female	84	96.6
Grade		
First grade	25	28.7
Second grade	22	25.3
Third grade	20	23.0
Fourth grade	19	21.8
Average age	21.7 years	

The results (Table 2) revealed that the student teachers who experienced practical teaching (STPP) on average evaluated their competence for different fields higher than students without teaching experience (STVP). The statistical significant differences were also found. The student teachers with practical teaching experience statistically significantly agreed more that they had mastered the subject of some modules ($t=-3.043$, $p=0.003$). They also statistically significantly agreed more that they possessed the ability of interpretation and evaluation of the information and facts ($t= -2.687$, $p=0.009$).

Table 2

The student teachers' view on the degree of achieving the teaching competences

Competence	Group	N	M	SD	t	p
Knowing and understanding the developmental characteristics of the pupils.	1	47	4.89	1.047	-.019	0.985
	2	39	4.90	0.788		
Mastering subject (facts, terms…).	1	47	4.43	1.211	-3.043	**0.003**
	2	39	5.15	0.961		
	1	39	4.85	1.113		
Ability for the interpretation and evaluation of the information and facts.	2	47	4.98	0.967	-2.687	**0.009**
	1	39	5.51	0.854		
Development of science thinking.	2	47	5.17	1.129	-1.816	0.073
	1	39	5.56	0.821		
Knowing, understanding and the ability to correctly use the terms.	2	47	5.02	1.053	-1.656	0.101
	1	39	5.38	0.963		
Flexible use of knowledge in practice.	2	47	4.79	1.250	-3.059	**0.003**
	1	39	5.56	1.071		
	2	39	5.69	0.950		
Ability to organize, lead the practical work, assessing working dangers and working in accordance with the regulations.	1	47	4.98	1.422	-2.863	**0.005**
	2	39	5.69	0.863		
Mastering the teaching skills related to the explanation of the subject contents.	1	47	4.64	1.258	-5.097	**0.000**
	2	39	5.79	0.833		
Mastering the methodical-didactical aspect of teaching.	1	47	4.89	1.088	-3.631	**0.000**
	2	39	5.62	0.747		
Mastering communication skills.	1	47	5.32	1.181	-1.863	0.066
	2	39	5.72	0.793		

1- students teachers without practical teaching experience
2- students with practical teaching experience

The student teacher with practical teaching experience also statistically significant agreed more that they possessed the competence of the flexible use of knowledge in the teaching practice (t=-3.059, p= 0.003), that they master the teaching skills related to the subject content explanation (t=-5.097, p=0.000) and that they master the methodical-didactical aspect of teaching (t= -3.631, p=. 0.000). They also statistically significantly evaluate their competences higher for leading the practical hours, like handicraft, cooking…(t=-2.863, p=0.005) than student teachers without practical teaching experience.

The Home Economics subject consists of four modules (economics, textiles, food and nutrition and the living environment). For the student teacher in the general perception of knowledge competencies it is very important how the student teacher perceives their knowledge of single modules. The results showed that students with practical teaching experience statistically significantly agree more that they mastered the subject of textiles, food and nutrition and the living environment better than students without teaching experience. Also they evaluated their knowledge from the economics module higher, but the difference was not statistically significant. The results showed that student teachers of higher grades (3^{rd} and 4^{th} grade) evaluated their knowledge higher than students from the 1^{st} and 2^{nd} grades (Table 3). The students also evaluated their knowledge the highest on food and nutrition topics. The results that food and nutrition topics were evaluated the highest were expected. In the study programme students listened to only one obligatory course from Economics and Textile while they could listen to several subjects on food and nutrition. So the result that students from higher grades (students with practical teaching experience) evaluated their knowledge higher for the content of the individual modules can also be connected with practical teaching experience where the student teacher

must think how to explain some subjects. But for the final conclusion the dipper research should be done.

Table 3

The student teachers' opinion on mastering the subject of single modules

How well did you master the following areas?	Group	N	M	SD	t	p
Economics topics	1	47	3.55	.829	-.725	0.471
	2	39	3.67	.621		
Textile topics	1	47	3.51	.930	-2.330	**0.022**
	2	39	3.90	.598		
Living environment	1	47	3.70	.832	-2.591	**0.011**
	2	39	4.10	.598		
Food and nutrition topics	1	47	3.96	.721	-2.561	**0.012**
	2	39	4.33	.621		

1- students teachers without practical teaching experience
2- students with practical teaching experience

Students were also asked to answer how many teaching hours they thought they must lead independently through the study time to achieve the stated competences. The answers showed that the students wished they had a lot more teaching hours than prescribed at this moment. The students estimate (on average) that they must have 116.71 teaching hours; now for practical teaching there is intended 30 hours per year (including the teaching hours of the student teachers, hospitation, observation of the school's organization, and the school kitchen…).

In question: "*What are your expectations regarding the practical teaching training?"* some interesting answers were given". The most important for them was that through practical teaching training they gain:

- teaching experience (23.7%),
- professional self-esteem (18.4%),
- professional competence (3.9%),
- get a good preparation for a future occupation (7.9%).

Furthermore, students also stated that they expected the possibility to use their theoretical knowledge in practical situations; learning how to react in different teaching situations, conflict resolution, principles of good communication, and how to solve some mistakes. They also want more teaching practice. One student teacher said directly what several said not so explicitly:

"*I wish we had more practical teaching training; now there are not enough practical teaching hours. Practical teaching training should start in the 1st grade, because some people take until the 3rd grade to realize that they are not born to be a teacher."*

Another student added*: "I wish we had more practical teaching training; now there are not enough practical teaching hours. Some subjects are not so important and could be deleted and replaced with more hours of practical teaching training."*

Some student teachers (students without teaching experience) also expect that for the first teaching hours they can teach in a quiet class. The answers between the students with teaching experience and others was very similar, but students with practical teaching experience more often stated that they wished for more hours of teaching practice and they also mentioned that they wished for a good cooperation with their mentor and the mentor's feedback on their realization of the teaching hours.

The role of mentor in the teaching process was examined with the question: "*What do you expect from your mentor?"* The results showed (Table 4) that students without teaching experience expected help with ideas on how to prepare the teaching hours but students who had practical teaching experience

statistically significantly expected more (X^2=4.455, df=1, p=0.018) that their teacher would accompany them and give them feedback – an analysis of the student's teaching hours.

Table 4

Student teachers' expectation regarding their practical teaching experience

What do you expect from your mentor?	Group	N	f	%
Conceptual assistance in the preparation of learning units.	1	47	16	34
	2	39	11	28
Providing adequate material working conditions.	1	47	5	10.6
	2	39	3	7.7
Correcting errors.	1	47	11	23.4
	2	39	6	5.4
Monitoring and an analysis of the students' teaching hours.	1	47	17	36.2
	2	39	23	59
1- students teachers without practical teaching experience 2- students with practical teaching experience				

The student teacher was also asked, what they thought is more important for professional competence development – practical teaching training or theoretical knowledge. The results revealed that students with practical teaching experience and student teachers without practical teaching experience agreed that practical teaching training was more important for competence development, than theory (Table 5).

Table 5

The student teachers' opinion on the importance of practical teaching training for professional competence development

Group	The practical teaching training is more important for professional competence development than theory.					
	Yes		No		I don't know	
	f	%	f	%	f	%
1	42	89.4	0	0	5	10.6
2	36	92.3	2	5.1	1	3.6
1- students teachers without practical teaching experience 2- students with practical teaching experience						

All the surveyed student teachers also agreed that the practical teaching training positively impacted the development of professional self-confidence.

Conclusions

The main goal of this study was to get student teachers' opinions on teaching competences' development through teaching practice and also their perception on self-confidence development through teaching training. The results suggest that:

- Practical teaching experience impacts the student teachers' perception of their professional competence. Students with practical teaching experience perceived themselves more competent in the field of subject knowledge, perceived themselves more didactically competent (for teaching theory and also practical work - handicrafts...) than student teachers without practical teaching experience.
- The student teachers connect practical teaching experience positively with self-esteem.

- The student teachers with more practical teaching experience emphasised the role of the mentor in terms of the importance of feedback (qualitative analysis of their work), while the student teacher without teaching experience expected that the mentor would help more on ideas in planning and that they would provide material conditions of work.
- The student teacher expect from practical teaching training to get teaching experience professional self-esteem, professional competence, a good preparation for a future occupation, knowledge on conflict resolution, principles of good communication. The student teachers want also more practical teaching hours.

The results highlight the role of practical teaching experience for competence development and professional self-esteem.

Bibliography

1. Cohen D. K., Hill H.C. (2001). *Learning policy: When state education reform works*. New Haven, CT, Yale University Press.
2. Hawkey K. (1998). Consultative supervision and mentor development: An initial exploration and case study. *Teacher and Teaching: Theory and Practice*, Vol. 4, pp. 331-348.
3. Hobson A. J. (2002). Student Teachers' Perceptions of School-based Mentoring in Initial Teacher Training (ITT). *Mentoring & Tutoring: Partnership in Learning*, Vol.10, Issue 1, pp.5-20.
4. Korthagen F. A. J., Kessel, J.P.A.M. (1999). Linking theory and practice: Changing the Pedagogy of Education. *Educational Researcher*, 4(28), pp 4-17.
5. Jurišević M., Stopar M.L., Magajna Z., Krajnčan M. (2007). Praktično Pedagoško Usposabljanje: Izhodišča – Model – Izkužnje (Practical pedagogical training: starting point-model- experience). Ljubljana, Pedagoška fakulteta Univerza v Ljubljani. [online] [08.12.2014]. Available at http://www2.pef.uni-lj.si/model1/Porocila/PEF_Monografija.PDF (In Slovenian)
6. Loughran J. (2006). *Developing pedagogy of teacher education*. London, Routledge.
7. Malm B. (2009). Towards a new professionalism: enhancing personal and professional development in teacher education. *Journal of Education for Teaching*, Vol. 35, pp. 77-91.
8. Moon B. (2007). Research analysis: Attracting, developing and retaining effective teachers: A global overwiew of current policies and practicies. Working Paper of Research Group on International Development in Teacher Education. The Open University, 45 p.

Developing Entrepreneurial Skills using Project Teaching

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Abstract: For successful development of entrepreneurship education the activity approach (learning by doing) is essential as well as the approach of linking theory and practice. The authors present their own experience with experimental teaching at two universities in Prague which main objective is to develop entrepreneurial skills of students namely initiative, proactivity, creativity, presentation and communication skills and ability to work in a team using project-based learning as a suitable educational concept. Based on the analysis, the authors present the results of surveys and interviews carried out after completion of experimental teaching focusing on evaluating the quality of teaching and contribution of the course to entrepreneurship education. The main benefit of the experimental teaching is that students consider the project-based learning as a suitable method to develop the key entrepreneurial competencies. This article is provided as one of the outputs of the research project of the Faculty of Finance and Accounting, which is realized in the framework of institutional support University of Economics project IP100040, IGA ID F1/31/2015.

Keywords: competencies, entrepreneurship skills, creativity, project-based learning, social relation.

Introduction

EU Commission recommends that entrepreneurship education at all types of schools should be focused primarily on developing such personal qualities of students which contribute to the development of positive attitudes towards entrepreneurship. It is mainly the development of creativity, sense of initiative, independence and teamwork. Entrepreneurs tend to have a very well developed ability to persuade others, communicate with others, are persistent and diligent, have a high need to achieve success, are not afraid of challenges and are good at solving them, have a high degree of confidence, they are independent and autonomous, creative with well-developed imagination, they can decide, can adequately take risks, are flexible, able to cope with the changes and tend to have leadership abilities and skills (Entrepreneurial Education…, 2012).

CELCEE - Kauffman Center for Entrepreneurial Leadership in Kansas (USA), based on years of research, found out that there were no special requirements for education of entrepreneurs, but helpful were well developed communication, information, interpersonal and personal skills, and understanding of the economy, knowledge and skills in marketing, management, mathematics and finance. These competencies, skills and knowledge can be obtained especially by education. Entrepreneurship ability of students, development of their entrepreneurial skills cannot be formed and developed by reading textbooks followed by subsequent memorization of the text. It is necessary to have an active approach - experiential learning which will bring students as closely as possible to the real life situations and will arouse their interest in education. (Nurturing the Entrepreneurial…, 2004).

In the author´s view, the most important for the development of entrepreneurial skills of students is to adapt the style of teaching to the conditions of real life. It is necessary to develop learner autonomy, but also teamwork, creativity and initiative in problem solving tasks. Knowledge of modern educational psychology emphasizes the need of increasing the learner autonomy, the need to shift from external control to self-regulation. Most authors of pedagogy call for a dialogue and wider use of teaching methods based on activation and cooperation, thus such methods which would help the student achieve the knowledge actively and not passively receive it. The student should develop their ability to communicate, collaborate and learn. For these reasons, it is undisputed that there is a growing importance of integrated teaching methods such as project-based learning and co-operative teaching.

Project-based learning can be ranked among the most comprehensive teaching method, or more precisely modern concept of education. It enables to absorb whole array of simpler teaching methods. The project is then a kind of framework in which the training based on diverse methods is carried out, mostly the ones based on activity. In terms of the traditional teaching the project-based method is based on the integration of the curriculum.

If the authors had to describe project-based learning, the typical features would be:

- is focused, thoughtful and organized;
- links theory and practice, is aimed at being used in life;
- handles complex assignment, is aimed at challenging questions and problems;
- assigned problem can be solved in different ways, there is not only one solution - which encourages creativity;
- teaching is student-centred;
- meets the needs and interests of students as well as teacher instructional objectives;
- students learn through experience and it is subsequently applied in real life;
- develops work and study habits, students take responsibility for their own learning;
- students are personally involved in the project - considering the proposal, solving of the problem, decision making, and using activity approach;
- students present their own ideas and realistic solutions;
- students learn to finish work, not being afraid of making mistakes, self-confidence is developing;
- allows students to work in a team and develop human relationships, a sense of responsibility, affecting the personality as a whole;
- always ends by producing a final product, thereby enhancing the sense of learning, it is also important to record the course of learning process;
- teacher acts primarily in the role of consultant, advisor, partner;
- it is a chance to do something different, different from the ordinary teaching (Projektové vyučování, 2011; Králová, Novák, Krpálková Krelová, Krpálek, 2014).

By using the project-based learning method students significantly develop initiative, independence, creativity, critical thinking, ability to collaborate, communicate, ability to solve problems, seek relevant information. When selecting the topics for the projects incorrectly it can happen that the knowledge of students taught by this method compared to the knowledge of students taught in a traditional way will be less systematically arranged. Project teaching is more difficult for preparation and skills of teachers - it requires a high level of teaching skills, changing their habits and attitudes, and also appropriate technical equipment of schools. It is time consuming. The systematic use in teaching has many distinct advantages for students and teachers too.

The ***main objective of teaching is to develop students´ entrepreneurial skills*** namely initiative, proactivity, creativity, presentation and communication skills and ability to work in a team of master´s students at the University of Economics in Prague and bachelor´s students at the Jan Amos Komensky University Prague by using the project-based method. Experimental teaching was implemented in the academic year 2014/2015 and 22 students attended the course of Presentation and Communication Technologies in Modern Concepts of Education at the University of Economics in Prague (Syllabus of the subject The Presentation and Communication Technologies in Modern Concepts of Education, 2015) and 102 students attended the course of Human Resources Management at the Jan Amos Komensky University Prague.

The partial aim is the qualitative analysis of the experimental teaching, in which we seek to uncover strengths, weaknesses, opportunities and threats of the use of project-based learning to develop entrepreneurial skills. In the following part of the paper the authors will specify the course of experimental teaching and research methods. Experimental teaching of both subjects was carried out by the same teachers so that their concept was very similar.

In the following part of the paper the authors will specify the course of experimental teaching and research methods. Experimental teaching of both subjects was carried out by the same teachers so that their concept was very similar.

Methodology

A) The course of experimental teaching in the subject Presentation and Communication Technologies in Modern Concepts of Education at the University of Economics in Prague

The course Presentation and Communication Technologies in Modern Concepts of Education was accredited by the Board of Education of the Faculty of Finance and Accounting of the University of Economics in Prague for the academic year 2013/2014, as an optional subject for students of bachelor´s and master´s study. It focuses on current trends in economic education and their reflection in modern conceptions of teaching at school and within company training. The main purpose of the course is based on the students´ achieved professional economic competencies to develop their ability to communicate competently, negotiate persuasively, present their ideas and visions so that they are fully understood and accepted and shared by those to whom they are addressed. The course is evaluated by 6 credits. It is taught every week: 2 hours of lecturing, 2 hours of seminar. In lectures the teacher uses dialogic teaching methods - exposition followed by discussion and in seminars the following methods are used - activating methods as problem teaching, role play, case studies and project-based learning is included in the seminars. The assessment of the course involves the preparation and presentation of the project which aim is to apply a selected modern concept of teaching in preparation of a course suitable for company training. At the beginning of the course students are given the project specification and evaluation criteria. Students are then divided into groups of 3-4 in each and are assigned specific roles. Experimental teaching takes place during the seminars. Their final performance is filmed by a video camera and evaluated by the students from other groups and the teacher. After successful completion the graduates should know and be able to apply new trends in adult learning with a focus on project-based, problem, cooperative and programmed learning and e-learning, and should be able to communicate and present effectively. They should be more creative, should be able to solve problem situations, manage teamwork and communicate more effectively. For preparing the concept of project-based learning, the authors have used the concept recommended by I. Turek (2006):

1) the theme, its specification, setting the targets of the project has been chosen and the outcomes have been specified;
2) project solving has been planned; the procedure has been developed - a plan of the project, its division into sub-tasks, the division of students into groups (3-4 students), time limits have been set;
3) the stage of the project itself, implementation of the plan in which students play a leading role; the teacher plays the role of the assistant, opponent, consultant, mediator, moderator, and organizer;
4) presentation of the results of the project, filming the presentations, evaluating the work done on the project.

Example of Project Assignment

Prepare a training course, the focus of which can be chosen from the following options:

- Communication Skills
- Presentation Skills
- Argumentation and Rhetoric
- Successful Dealer
- Teaching Skills

Course participants are managers - targeting of the course depends on the type of company, which you can choose. Duration of the course is 2 days for 8 hours, within 2 weeks.

Tasks:

- Specify the course content (content, topics, timetable)
- Specify the educational goals of the topics
- In methodology characterize the use of problem-based learning and group work in particular topics (creating groups, the division of roles, evaluation criteria)
- Specify the criteria for achieving learning outcomes – of the entire course
- Present proposed course (educational product) from the perspective of the employee of an education agency (advertisement, presentation, poster, etc.). Time: 30 min.
- Simulate a sample of a teaching hour of the course using problem-based learning and group work. Time: 10 min.

Criteria of Project Evaluation – Semantic Differential Scale: +2 +1 0 -1 -2;

(+2 – all requirements met, +1 – meets most requirements, 0 – requirements met only partially, -1 – bellow requirements, -2 – does not meet requirements)

- Specification of the content of the proposed course
- Specifications of educational goals
- The level of usage of modern teaching concept
- Discourse (Language) - variety, style, comprehensibility, literary language
- Dealing with questions and objections - reasoning
- Speech - dynamics, pace, intonation, eye contact, facial expressions, posture, movement, gestures, proximity, chronemics
- The level of presented output (PowerPoint presentation, poster, advertisement, etc.) - originality, comprehensibility of presented information, technical processing, colours.

Final assessment is carried out with the authors of the paper together with all the students. The group of students is assessed as well as the individual students are assessed by the others and self-assessment is carried out onsite too. For further analysis of the performance the video camera recording is available to be downloaded from the Department website by the participants of the course. Students are recommended to do so. The following seminar, which is also the last one in the semester, in the context of self-reflection students present benefits, positive and negative aspects of the project-based learning or any other comments they have.

B) The course of experimental teaching in the subject Human Resources Management at the Jan Amos Komensky University Prague

The subject Human Resources Management is obligatory in the course of bachelor´s studies in the major field of study called Management Studies. The course is evaluated by 3 credits and it is taught every week: 2 hours of lecturing (24 hours) and 1 hour of seminar (12 hours).

The main objective of the course is to introduce human resources management as a specific management area and as a complex and multi-functional organizational system. The main aim is the development of skills necessary to establish and maintain successful employer-employee relations. In lectures the teacher uses dialogic teaching methods - exposition followed by discussion and in seminars the activating methods are used. As in the previous course, project-based learning is included in the seminars, namely 6 lessons. The assessment of the course involves the preparation and presentation of the project which aim is to prepare the advertisement for the selected job position and its presentation at a fictional job trade fair. At the beginning of the course students are given the project specification and evaluation criteria. Students are then divided into groups of 3-4 in each and are assigned specific roles. The final performance is evaluated by the students from other groups and the teacher.

Project Assignment

Think of a job position which will be advertised by human resources department at a job trade fair, which takes place in Areál Výstaviště in Prague 7.

Tasks

- Present the company (enterprise, corporation) and select the job position which will be advertised at the job trade fair. Think of a logo.
- Take into account the above mentioned attributes (company´s name and its brief introduction, job title, job description, workload, the requirements for candidates, what the company can offer (benefits, bonuses), contact person (name, phone, mail), setting the date by which it is possible to respond to the ad, location or place of work, salary offered).
- Prepare a marketing tool - poster for promoting the advertised job.
- Present the company (enterprise, corporation) and the offered job position to potential candidates at the job trade fair. Time: 20 min.

Figure 1 presents students´ independent work on the project.

Figure 1. Project work of students (own source).

Criteria of Project Evaluation:

- the content of the poster - job title, relevance of the information on the ad, idea;
- quality of the poster - comprehensibility, clarity, variety of colour, logo, format;
- presentation skills of students - verbal expression, using of non-verbal means of communication, the ability of reasoning and presenting their own view, managing of constructive criticism.

The presentation is followed by a discussion between students and presenters, the other students play the role of potential candidates for the proposed job. They ask additional questions and get the required information. The discussion is followed by evaluation in which students from other groups and the teacher take part and the predetermined criteria are taken into account.

Results and discussion

As a partial goal the authors set the qualitative analysis of the experimental teaching, in which they seek to uncover strengths, weaknesses, opportunities and threats of the use of project-based learning to develop entrepreneurial skills.

The qualitative analysis is based on the results of the evaluation of quality of the subject The Presentation and Communication Technologies in Modern Concepts of Education taught in the academic year 2013/2014 and 2014/2015 and on the results of the evaluation of quality of the subject Human Resources Management taught in the academic year 2014/2015.

The evaluation was obtained in the form of analysing surveys, students were questioned at the end of the semester at The University of Economics in Prague in the year 2013/2014 (n = 6 out of 7) and in the year 2014/2015 the structured interview was carried out (n = 20 out of 22). The evaluation at the Jan Amos Komensky University Prague was obtained in the form of analysing surveys (n = 102). The results are shown in Table 1.

The authors state that their main objective should be to support the strengths, use opportunities, eliminate weaknesses and avoid threats. The above analysis shows that the project-based learning brings many positive moments and opportunities; demands on students are higher, but the learning results are more permanent because the learning process is supported by their interest, activities, personal responsibility, usability in real life and pride in product formed (the project). The presentation

of the product itself becomes an important part of the learning process. Students have the opportunity to present their own product, to show their presentation skills. They learn to accept constructive criticism and to evaluate their own work and the work of the members of the group at the same time. The aim is to be as close as possible to real life situations so that schools prepare graduates to be able to work in teams, communicate effectively and solve problems.

Table 1

Scheme 1: SWOT analysis

	SUPPORTING (to achieve the objective)	**HARMFUL** (to achieve the objective)
INTERNAL (attributes of organization)	**STRENGHTS** • Interesting content - topics of projects • Using creativity • Motivation for learning new things • Engaging in higher levels of thinking • Learning to find and work with information sources • Learning to plan and organize work • Linking theory and practice • Cooperation and teamwork • Specific output • Deeper insight into the issues • Training of presentation skills, reasoning • Organization of teaching - precise rules • Video recording of the presentation of the project - noticing of nonverbal communication • Didactic competences of the teacher	**WEAKNESSES** • Time for project preparation • Inadequate classroom for group work • The absence of students on seminars - not always all team members met together • Assessment of individual performance within the group • Most of the students had never met before - did not know each other • Effective communication in a team • Managing assigned roles in the group
EXTERNAL (environmental attributes)	**OPPORTUNITIES** • Search for new topics on project-based learning • Require satisfactory classroom – to be able to organize the space (tables and chairs) • With a larger number of students to create larger groups - from different fields of study • Linking to professional career - project management in companies • Using of project-based learning in other subjects	**THREATS** • Evaluation of individual student´s performance • Not enough students in registered for the optional subject • Teachers who do not have sufficient teaching skills for the implementation of project-based learning

At the University of Economics in Prague, the quality of experimental teaching was checked by using the method of structured interview with a combination of open and closed questions (open questions prevailing), at the Jan Amos Komensky University Prague a survey was conducted. The authors were interested in concrete results i.e. in how students rate the expertise of teachers, teachers' willingness to help, their interest in the subject and the necessity of the subject, the suitability of the project-based learning, usefulness for real life and overall quality of the subject.

The results of the survey at Jan Amos Komensky University Prague (n=102):

- 92% of respondents considered the teacher as an expert,
- 90% of respondents considered the teacher as willing to help when needed,

- 89% of respondents considered the subject Human Resource Management as interesting and, with regard to their major field of study as necessary,
- 86% of respondents considered using of project-based learning as appropriate in the subject Human Resources Management,
- 90% of respondents stated that this form of teaching was beneficial because it brought teaching close to real life situations and they had the opportunity to develop creativity, presentation and communication skills and ability to work in a team,
- 94% of respondents were satisfied with the overall quality.

The results of the interview at University of Economics in Prague (n=22):

- 100% of respondents considered the teacher as an expert,
- 100% of respondents considered the teacher as friendly and willing to answer students' questions,
- 100% of respondents found didactic competence of the teacher as excellent,
- 87% of respondents found the content of the course useful in real life situations,
- Preparation of the project in teams bringing experience for future career is considered by respondents to be very important - on a scale from 1 to 10 the average rating was at 8.8,
- Using the concept of project-based learning to prepare the output of the course was evaluated by the respondents on a scale from 1 to 10 at an average value of 8.5,
- 91.7% of respondents considered a form of presentation of the project in front of other students as contribution to the development of their presentation skills,
- 97.6% of respondents were satisfied with the overall quality of the course.

Conclusions

On the basis of completed research and experimental teaching, the authors present in conclusion that:

- project-based learning contributes to the development of creativity, communication and presentation skills, ability to work and communicate in a team, i.e. develops entrepreneurial skills;
- project-based learning brings teaching close to real life situations;
- project-based learning requires teachers with sufficient didactic competences; preparation, implementation and evaluation is challenging work;
- project-based learning contributes to the achievement of educational goals at higher levels of Bloom's Taxonomy.

Bibliography

1. Králová A., Novák J., Krpálková Krelová K., Krpálek P. a kol. (2014). *Teoretické aspekty racionalizace ekonomického vzdělávání*. (Theoretical Aspects of Economic Rationalization Education). Praha, Press 21. 2014. p. 534. ISBN 978-80-905181-5-5. (In Czech and Slovak)
2. Turek I. (2006). *Úvod do didaktiky vysokej školy*. (Introduction to Didactics of Tertiary Education). Bratislava, STU, 2006. 317 p. ISBN 80-227-2506-4. (In Slovak)
3. *Nurturing the Entrepreneurial Spirit* (2004). National Content Standards for Entrepreneurship Education[online] [20.12.2014]. Available at http://www.entre-ed.org/Standards_Toolkit/nurturing.htm
4. *Entrepreneurial Education at School in Eirope– Secondary Education* (2012). National Strategies Curricula and Learning Outcomes. EURYDICE, EU, p. 98. [online] [03.01.2015]. Available at http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/135EN.pdf
5. *Projektové vyučování. Metodická příručka.* (2011). (Project-based learning. A Guidebook). Channel Crossing s.r.o. [online] [12.12.2014]. Available at http://www.kurzyproucitele.cz/downloads/metodiky/Metodika_4_ProjektoveVyucovani.pdf (In Czech)
6. Syllabus of the subject The Presentation and Communication Technologies in Modern Concepts of Education. (2015). [online] [06.01.2015]. Available at http://isis.vse.cz/katalog/syllabus.pl?predmet=96694;zpet=..%2Fkatalog%2Frozvrhy_view.pl%3Frozvrh_ucitel%3D96159%2Czobraz%3D1;jazyk=3;lang=cz

The Attainment of the Ideas of Handicraft and Home Economics Syllabus in School Reality

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Abstract: Today, technology is increasingly becoming a part of our daily experiences and there are domains of life where human hands have no function in the creation of a product. All this raises the question how much or whether at all should one be able to make something by hands, and, therefore, perhaps is craft as a school subject outdated and should be replaced by the theoretical discussions about the technological processes? Surely, the content of craft education cannot be the same as it was in the beginning of last century. New standards arise in the handicraft and home economics instruction: it is not enough for students to merely acquire skills and the ability to make something by imitation; but the whole process has to be connected with pupil's meaningful creative action, ethnic experience, innovation and modern technology. This is the direction pursued in Estonian syllabus development. But it is quite another situation, when it comes to the content of the subject and the activities chosen to promote the learning in the reality of school practices. A study was carried out to learn in what extent are subject teachers able to adjust their teaching practices according to the syllabus? The handicraft and home economics bachelor's degree students were asked to write an essay describing their subject-related learning experiences in comprehensive school. The short writings of university entrants of three different academic years were analysed according to the phenomenographic study analysis theory. Results showed that, unfortunately, subject teachers have difficulties in altering their habits and this shows the need for syllabus based in-service training.

Keywords: school education, handicraft, curriculum, ideas, reality.

Introduction

The aim of the article is to discuss the syllabus of craft and the realization of its ideas in the real school life of Estonian general education. Craft as a general educational subject has been included in the Estonian Curriculum for General Education School since 1894. At the time teaching was based on the principles of the so called labour school (*Arbeitsschule*) principles, which state that including craft in the curriculum should aid students in becoming more independent and the school in becoming more viable (Lind, 2009). With a few exceptions craft has been a school subject from the given period up to today; the development of its content and aims has been influenced by the changes in society, different trends in pedagogical theories and the content and teaching systems of the subject in other countries (Lind, 2012). Surely, the content and organization of craft education cannot be the same as it was in the beginning of last century.

The conception of the Estonian national curriculum for basic and upper secondary schools implemented in year 2002 (Põhikooli ja… 2002) differed substantially from earlier curricula. The centralized *Lehrplan*-type curriculum that concentrates on subject and content by indicating precise tasks was replaced by the student-centred curriculum that is more indicative, giving general guidelines (Ruus, Veimer, 2011). For teachers, this shift brought along following changes. In the centre of subject teaching was no longer a detailed description of the subject content (with a predetermined number of lessons allocated for a topic and a list of practical outputs), instead the emphasis was put on learning skills and general competencies. In the previous curriculum that took effect in year 1996, the competencies were already noted, although cursorily and in an elementary manner. Therefore, there had been a limited exposure to the concept among Estonian teachers (Jaani, 2004, 11).

In the curriculum of 2002, the craft subject's syllabus was flexible and enabled schools decision-making possibilities when choosing what, in what extent and how to teach in craft subject (Ainevaldkond…, 2006). The main goals of craft education were outlined: execution of pupil's creative ideas; sustainable use of materials; knowledge of terminology and an elementary technical

literacy; information search, analysis and adaptation; maintenance of national heritage; the ability to work alone and in collaboration; and appreciation of the traits necessary for work. In the teacher's discretion was how to achieve the goals – which technologies were learned and skills developed.

Characteristic to education is its dual nature – it is simultaneously conservative and innovative, maintaining cultural heritage and trying to solve future challenges (Aizsila, 2012). This is a contradiction that all educational stakeholders are facing. J. Husu (2002) noted that restructuring school curricula and pedagogical practices is of little value if it does not take teachers into account. According to J. Husu (2002) and T. Autio (2012), the teacher is in the centre of making, developing and redefining the curriculum. However, teachers do not only deliver the curriculum. It is through their professional judgment that makes curriculum acted and not just implemented from above. What teachers think, what teachers believe and what teachers do in schools is what ultimately shapes the kind of education young people get (Husu, 2002, 14). Craft teachers' daily work and direct contact with adolescents creates and carries mainly the subject's meaningfulness for pupils.

Methodology

The aim of current study was to find out in what extent handicraft and home economics subject teachers are able to adjust their teaching practices according to the curriculum. The study follows phenomenographic research approach. Phenomenography is aimed at the study of variation of human experiences of phenomena in the world (Limberg, 2008). According to Marton (1981, 180), phenomenography studies the ways of understanding and experiencing the physical and social world, F. Ornek (2008) has said „phenomenography is the empirical study of the different ways in which people think of the world".

The target group for this study was first year handicraft and home economics bachelor's degree students from three different academic years (2008, 2009, 2013) who were asked to write an essay titled "My experience of handicraft and home economics education during my studies" describing their subject-related learning experiences in comprehensive school. The data consisted of 29 short writings (accordingly 7, 16 and 6). The difference in the number of essays from year to year is due to the number of students enrolled to the course. Given years were chosen based on the length of studies conducted on the basis of the 2002 curriculum: pupils who graduated from school in years 2008 and 2009 had experienced the transition from the old to the new one – last three years of their basic education were based on new curriculum; those who graduated in 2013 studied the entire basic school under the new syllabus. Thus, by the time, the teachers had to already be accustomed with the new curriculum.

The research questions focused on exploring how students evaluate the content and organization of the experienced handicraft and home economics lessons, teacher's work (including the use of different methods of instruction), the overall necessity of the subject and the timeliness of the practical outputs. The preliminary assumption was that, despite the societal changes and its effect on the evolution of syllabus, the traditional content based approach to the teaching of handicraft and home economics subject is relatively slow to change.

The analysis of 29 short writings was carried out according to M. Huusko and S. Paloniemi's phenomenographic study analysis theory (Huusko, Paloniemi, 2006, 167-169). In order to ensure the anonymity of the authors, each essay was given a numeric code. The aim of the analysis was to find structural differences from the dataset that explain the relationship between the concepts related to the phenomenon under investigation. The respondents' most characteristic views are presented to illustrate the results.

Results and Discussion

Students' writings provided rich data regarding their experiences in handicraft and home economics education. In connection with the topic, the main results related to the syllabus will be discussed here: subject content and practical outputs, the aims of the subject, teaching methods and learning arrangements.

Subject content and practical outputs. Handicraft and home economics are taught as an integrated subject in comprehensive schools in Estonia. Since the beginning of last century, the content of syllabus of handicraft has been distributed on a large scale between four classical themes: crocheting, knitting, embroidering and sewing. However, the demands and expectations for craft education alter in accordance with the changes in society. In the curriculum of 2002, 21 optional theme units were added (e.g. felting, quilting, silk painting, frame weaving, home decorating etc.) from which the teachers were required to choose at least one per year by considering pupils' interests and local possibilities. The intention of adding the optional theme units was to modernize and diversify the content of syllabus, add creativity to the subject and bring the subject closer to the applied arts (Põhikooli ja…, 2002).

The difficulties in implementing the 2002 curriculum (especially in the transition from one curriculum type to another) allowed to arise the situation where teachers were unable to follow the reform and the instruction stayed similar to the times few decades ago (Ainevaldkond…, 2006). When recalling the content of the craft lessons, students describe mainly the lessons of crocheting, knitting, embroidering and sewing. Appears that it was especially difficult for older teachers to leave the accustomed routine and implement new topics in their work.

2009-8: "Although life has moved on, nothing has really changed."

2008-5: *"I made the same kinds of things as my mother did in school. All crocheting, knitting, sewing and embroidering was composed according to a certain standard. For fun, one of my classmates presented once the teacher exactly the same work that we were making, only it was made by her mother thirty years ago."*

2009-8: *"In general, not much has changed during last ten years. My little sister is still making almost the same kind of things as I did."*

2008-3: *"There were so many optional technologies and they seemed really exciting and something that adolescents would enjoy learning. However, when looking at this list I had to admit that we were not taught almost anything like this in our school. Instead, we had a lot of lace-making and tablecloth hemming."*

Besides the inability to follow the curriculum change, there have been teachers who simply do not like or master a certain technique and decide to ignore it despite the syllabus.

2009-6: *"Our classroom was well equipped with sewing machines and other necessary tools, but by the end of basic school I did not even know how to change the thread on a sewing machine, we did not sew once. As I understood it, the teacher could write whatever she wanted in the school diary and nobody checked whether the lessons were like this or not."*

Alongside the rather negative experiences, students reported positive examples as well. They described teachers who knew how to make the subject content appealing by choosing interesting activities and focusing on the creativity.

2009-2: *"I remember one sewing project we made. We had to creatively sew different fabrics between base fabric and tulle so that finally formed a fabric collage. The outcomes of each pupil were really interesting and picturesque."*

Emphasizing the creative process in making should be a natural part of the handicraft and home economics subject. According to the syllabus (Põhikooli ja…, 2002), this school subject develops pupil's creativity and aesthetic taste and s/he learns to appreciate the fulfilment of creative possibilities offered by manual activity. In the assessment guide, teachers were recommended to evaluate pupils' creativity and the wholeness of the prepared artefact in addition to the application of the knowledge and skills obtained. Students' writings showed that more attention was paid on the creativity and the

use of different kinds of materials and technologies in schools that follow special programmes (such as art schools or Waldorf schools).

As mentioned earlier, handicraft and home economics is an integrated subject in comprehensive schools. The amount of lessons dedicated to the topics of home economics was left to teachers to decide autonomously. The syllabus stated merely that textile work and home economics are given every year (Põhikooli ja…, 2002). Home economics is often understood as mere "cooking lesson" among teachers, pupils and parents (Tamm, Palojoki, 2012, 185). This confusion has caused the situation where there were no home economics lessons at all in some schools, because they require a special learning environment – learning kitchen – and those lessons are labour-intensive both to prepare and carry out for teachers. As pupils really enjoy the home economics some teachers even have, unfortunately, used this part of the subject to manipulate students.

2009-9: *"Our teacher used the home economics lessons as a tool of manipulation although we really enjoyed those lessons and wanted to cook. If we did something she did not like then she replaced home economics lessons with handicraft."*

However, home economics' part of the syllabus included several topics besides cooking (e.g. basics of nutrition, hygiene, etiquette, home maintenance, budget etc.). Despite the fact, only few students mention those themes to be addressed in home economics lessons.

2009-8: *"We discussed food and nutrients, vitamins, menus, food preservation and lots of other things in home economics lessons."*

Students admit that they did not find the theoretical home economics lessons appealing.

2008-6: *"Our teacher wished to carry out lectures but pupils were not interested in those. Therefore, throughout the basic school we had only a couple of theoretical lessons."*

Subject content is closely related to the practical outputs in handicraft. Sadly, there are teachers who do not take into consideration pupils' interests or what is currently popular. Instead they tend to stick to their old conventions. In retrospect, students express their criticism in this respect.

2008-3: *"Why couldn't sewing an apron or a pillowcase be replaced by something more necessary and interesting?"*

Making outmoded items can make pupils work only to earn the positive grade. This in turn diminishes the meaningfulness of the subject and causes reluctance among adolescents.

2009-2: *"After getting the necessary grade I have not used or worn any of the items I made."*

Earlier syllabi provided teachers with recommended practical outputs. Teachers of long service had been following those recommendations for years and with the transition to new curriculum it was probably convenient to continue the usual practice instead of introducing themselves to something new.

2009-3: *"We weren't left much choice – everybody had to knit mittens and socks, sew aprons and pot holders. The only thing we were left to decide was the colour."*

Students proposed in their essays some topics that they would have found interesting or necessary to learn and make. For example, how to recycle and upcycle materials, customize sewing patterns and clothes, and learn about style and fashion.

The aims of the subject. Craft-making has many benefits for pupils. The curriculum of 2002 stated that the main goal of handicraft and home economics subject is maximum possible promotion of pupil's personality and preparation for independent adult life. Teachers surely keep this goal in mind

in their work, but the question is what it means for them to manage in life and what kind of knowledge and skills do they find significant.

2008-3: *"As our teacher told us – handicraft is exact science – we didn't need much creativity during these years. Everything was strictly in place what to do, how to do it and how the final result had to look like."*

The intervening years have not changed some teachers' understandings, unfortunately: "*We were not expected to be creative or use our imagination. It was more about acquiring basic knowledge and performing given tasks"* (2013–5).

One positive aspect is that students are able to see the beneficial side of the subject, even if the teacher was „*old-fashioned and rigorous*": *„I need these skills in life and I'm sure that these years we spent learning handicraft in school were not totally useless"* (2008-5).

Students have expressed the aim of the subject as they see it in their writings: *„Young people learn by knitting, sewing, cooking and working with metal and wood about the nature and origin of things that surround us"* (2013-4); *„Craft-making fosters our ability to think logically and this ability is something that we need in life"* (2013-6).

Teaching methods. The repertoire of teacher's teaching methods depends on many things – from teacher's own learning and teaching style as a part of her personality to the teacher training, school and classroom's material possibilities. Pupils' lack of interest in relation to the subject has to be at least partly linked to the dull lessons and the little use of active learning and other "non-traditional" teaching methods. It is hardly doubtful whether pupils are able to adequately evaluate the interestingness of the teaching. However, the question arises whether pupils are at all aware what new learning style is if teachers do not discuss it with them (Sarv, 2008). One possibility to evaluate the methods is to compare them with the ones used in other subjects. A study conducted in Estonian schools has shown that teachers tend to be highly interested in subject didactics but they show a little interest in active learning methods. Consequently, subject teaching is seen rather traditionally and therefore Estonian school is a relatively subject-centred environment for development (Ibid.).

Handicraft and home economics syllabus recommended first of all learning how to design and plan, choose and use the materials and tools, work according to written instructions and blueprints, and use different information resources. All this expects different approaches to the learning from both teachers and pupils.

Students' memories of the instruction in craft lessons are at large similar. First, the teacher gave the theory and pupils often had to take notes or rewrite teacher's words. Next, the teacher demonstrated step-by-step a new technology and after that the pupils practiced the technology on some swatches. Finally, pupils started making the practical item and teacher helped those who asked. This was the routine lesson after lesson. Students are quite critical of this procedure: *„due to this teaching method many students did not get to fully participate in the classes"* (2009-16). Besides that, some students emphasize that the most tedious experience in the handicraft was making a swatch for each crochet stitch.

2009-1: *„Theoretical part was minimal. Most of the time we were just chatting and our teacher was walking around the classroom and helping us. /…/ Our teacher could have at least discussed costume history or something like that while we were pottering at our items. /…/ Instead of monotonous knitting from lesson to lesson we could have had more home economics."*

Several students have been in the role of „assistant teacher“: *„The teacher always left the classroom and we had to make most of the things on our own. I was most skilful in our class and I was always helping others"* (2013-4). At the same time there are students who recall with gratitude „*interesting and varied lessons*" (2009-14) and several of them point out that „*those lessons were good tension relievers"* (2009-8).

As previously noted, in many schools, home economics comprised mostly cooking. Pupils were divided into groups and they prepared food as „families". But there were teachers whose approach was exactly the opposite – they dealt with home economics only theoretically. Pupils had to write down various information: from practical information to that *„how big the pieces of potatoes have to be"* (2009-6).

2009-3: *„We even had to learn how to lay the table with the help of textbook, because we were never required to do it properly in learning kitchen."*

2008-5: *„Our learning method was mostly the one of pen and notebook. And so three weeks – only writing."*

The same student expresses hope that *„due to new teaching methods and modern approaches has everything handicraft and home economics related become a little bit more enjoyable."*

Learning arrangement. Until 2002 craft education was organized according to the historically rooted principle, where handicraft lessons for grades 1 to 3 were given simultaneously to both, boys and girls. Starting from the 4th grade, pupils were divided into two gendered groups: girls studied textile works and home economics, boys learned wood and metal works. In 2002, an amendment was introduced to the syllabus according to which the pupils were to be divided into groups without respect to the gender but in accordance with pupils' interests and wishes. Additionally, the teachers were suggested to change in the mutual agreement study-groups so that handicraft and home economics group would get to participate in technical workshop and, at the same time, the other group would get some knowledge in home maintenance and cooking. The exchange of study groups was optional in the 2002 curriculum so that teachers would get acquainted with the idea. In the currently valid curriculum (implemented in year 2011) it has become a compulsory part of studies (Tamm, Palojoki, 2012).

Students note that pupils were not informed about the possibility to choose between the textile works and wood and metal works. Two students asked to change the group, but sadly they were turned down in a humiliating way.

2013-1. *"Once I raised my hand in handicraft lesson and asked why we, girls, cannot participate in wood and metal works. Unfortunately, I have forgotten the teacher's answer, but I know that it was something like this: why would girls even want to do something like that. Laughter followed."*

The exchange of study groups depended on two parties – the teachers of both groups. If one of them was not interested in such work arrangement then the exchange did not take place. It can be concluded from the essays that girls would have been highly interested in working in workshops and boys craved to cook in the kitchen. Nevertheless, only five students mention that the change took place in their school, more precisely year 2008 – 7 essays and 2 mention the exchange; 2009 – 16 essays, 2 exchanges; and 2013 – 6 essays and 1 exchange. Consequently, in this case it cannot be argued that becoming accustomed with the requirements and recommendations of the new syllabus actually changed the way learning was arranged. In conclusion, if there is an idea formulated as recommendation in the syllabus, it will remain so.

As mentioned earlier, the exchange of study groups has been made mandatory in the currently valid curriculum of 2011. However, the most significant curriculum change to be considered is the direction from teacher centred to student centred instruction and learning. This sets a challenge for teachers to replace their accustomed methods with new ones. Further studies are needed to indicate whether and how teachers cope with that challenge.

Conclusions

New standards arise in the handicraft and home economics education due to the changing and challenging world around us. It is not enough for pupils to merely acquire skills and the ability to make something by imitation, but the whole process has to be connected with pupil's meaningful creative action, ethnic experience, innovation and modern technology. This is the direction pursued in Estonian syllabus development. Current study shows that to amplify the meaningfulness of handicraft and home economics education in general schools, it is not sufficient to simply update the syllabus. The latter might be as timely as possible but its interpretation and the actual work in the classroom depends largely on the teacher. Current study shows that if there was a contradiction between the syllabus and the classroom reality, it appeared throughout all aspects of the teaching.

To conclude, the curriculum of 2002 was not fully implemented in the school reality and the actual work was based on out-dated principles. Results showed that, unfortunately, subject teachers have difficulties in altering their habits and this shows the utmost need for syllabus based in-service training.

Bibliography

1. Ainevaldkond „Tehnoloogia" (2006). (Subject field "Technology"). *Arenev õppekava, õpikeskkond ja ainevaldkonnad.* (Developing curriculum, learning environment and subject areas), Tartu, Tartu Ülikooli Kirjastus, pp. 198-213. (In Estonian)
2. Aizsila A. (2012). Teacher further education for professional development. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality.* (REEP) Nr.5, LLU, Jelgava, pp. 81-87. [Online] [21.12.2014]. Available at http://llufb.llu.lv/conference/REEP/2012/REEP-2012-proceedings-E-ISSN-2255-808X.pdf
3. Autio T. (2012). The Finnish case of Schooling and Curriculum: between and beyond the German Didactic and the Anglo-American Curriculum. *Japanese Journal of Curriculum Studies*, Vol 21.
4. Husu J. (2002). *Representing the Practice of Teachers' Pedagogical Knowing*. Turku, Finnish Educational Research Association.
5. Huusko M., Paloniemi S. (2006). Fenomenografia laadullisena tutkimussuuntauksena kasvatustieteissä. (Phenomenography as a qualitative research trend in educational sciences), *Kasvatus*, Vol. 2, pp. 162–173. (In Finnish)
6. Jaani J. (2004) .Õppekavakogemus õpetab. (Curriculum experience teaches.) *Haridus*, Vol. 8, pp. 11 – 14. (In Estonian)
7. Limberg L. (2008). Phenomenography. *The Sage Encyclopaedia of Qualitative Research Methods*. Lisa M. Given (Ed.), pp. 612-615. Thousand Oaks, CA, SAGE Publications, Inc.
8. Lind E. (2009). Studying and Teaching Craft: Possibility and Necessity. Proceedings of the Conference *Crafticulation & Education*, Helsinki 23.- 27. Sept. 2008. Leena K. Kaukinen (Ed). (TECHNE SERIES Research in Sloyd Education and Crafts Science; A:14/2009), Helsinki, Helsinki University Press, .pp. 206-213.
9. Lind E. **(**2012). The content and aims of Handicraft as a subject in Estonian General Education schools pursuant to social requirements. *CFMAE: The Changing Face of Music and Art Education*, 4/2, pp. 87-99.

10. Marton F. (1981). Phenomenography - describing conceptions of the, world around us. *Instructional Science, Vol.* 10, pp. 177–200.
11. Ornek F. (2008). An overview of a theoretical framework of phenomenography in qualitative education research: An example from physics education research. *Asia-Pacific Forum on Science Learning and Teaching*, Vol. 9/2, Article 11. [Online] [21.12.2014]. Available at http://www.ied.edu.hk/apfslt/v9_issue2/ornek/
12. *Põhikooli ja gümnaasiumi riiklik õppekava.* (2002). (National Curriculum for Basic and Secondary School) In: RIIGI TEATAJA I, 20. [Online] [07.12.2014]. Available at http://www.riigiteataja.ee/ert/act.jsp?id=1008388 (In Estonian)
13. Ruus V.R., Veimer J. (2001). Õppevaldkonnad ja valdkonnapädevused. (Fields of study and field competencies.) *Õpetajale uuendatud riiklikust õppekavast.* Tallinn: Haridusministeerium, pp. 12 - 18. (In Estonian)
14. Sarv E.S. (2008) *Õpetaja ja kool õpilase arengu toetajana.* (Teacher and school as supporters of student development.) Tallinn, Tallinna Ülikooli Kirjastus. (In Estonian)
15. Tamm J., Palojoki P. (2012). New curriculum, new directions? Using socio-cultural perspective to develop home economics education in Estonia. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality.* (REEP) Nr.5, LLU, Jelgava, pp. 181-188. [Online] [21.12.2014]. Available at http://llufb.llu.lv/conference/REEP/2012/REEP-2012-proceedings-E-ISSN-2255-808X.pdf

Peer Learning for the Development of Reading Literacy: Teachers' View on Implementation Results

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Abstract: The aim of the article is to reveal the teachers' view on the implementation experience of the program "Peer learning for the development of reading literacy (PLDRL) for Grades 5 to 7" and their evaluation of the program. The research questions of the paper are the following: How does the introduction of PLDRL influence teaching process and its results? Which factors influence the implementation of PLDRL in the teaching process? In order to provide answers to the above mentioned research questions SWOT analysis and interviewing of teachers in the project European Social Fund Project "Development and implementation of the support programs for establishing the support system for the young people under the exclusion risk" schools were used. Interviews were used to find out how the introduction of the PLDRL influenced the teaching process, its results in the context of reading and the teacher's activities in the organization of the teaching/learning process in general education. SWOT analysis was performed in order to define internal and external factors that influenced the implementation of PLDRL. In academic years 2012/2013 and 2013/2014 the program "Peer learning for the development of reading literacy" was approbated in 49 general comprehension schools in Latvia; the population of the study were 117 teachers and 1744 pupils representing 139 different class sets.

Keywords: reading motivation, reading literacy, peer learning, PLDRL implementation experience, general education.

Introduction

One of the common goals of the European Union (EU) is to decrease the number of 15 year old pupils who have a comparatively low reading and writing literacy and the ability to comprehend a written text from 20 to 15 per cent by 2020 (Geske, Grīnfelds, 2010).

In order to attain the above mentioned aim the European Commission experts emphasize as the most important:

- the necessity for the teachers to find and determine time for teaching reading, for pleasure reading when pupils themselves choose their reading matter, a comfortable place and time for reading;
- the importance of literacy and reading and their connection with the entire learning content as well as their impact in the entire education system (general secondary education, vocational education as well as the studies in higher education institutions (EU High ..., 2012).

The State Education Content centre of Latvia has put forward the following priorities for the improvement of teaching and educational work in general education and interest education in academic year 2014/2015: to organize a purposeful teaching/learning process based on pupils' experience which promotes - the integration of the teaching/learning content and the development of life skills using more frequently in the acquisition of the content such methods as experiment, modelling, role plays; development of literacy of students of all age groups in all school subjects (IZM, 2014).

Literacy comprises a broad range of cognitive skills starting with the recognition of the written text, knowledge about words, grammar, and language and text structure till knowledge about the world in general. It includes also meta-cognitive skills – to apply different corresponding strategies in the work with the text (Geske, Grīnfelds, 2010).

Teaching of reading means both to acquire of the reading technique and to comprehend the meaning of what has been read. The quality of the acquisition of pupils' literacy is indicated by four criteria:

correctness, being aware (*comprehension*), nimbleness (speed), and expressiveness (characteristic to reading aloud) (Anspoka, 2008).

To improve the literacy researchers (Linnakylä, Malin, 2004) suggest that teachers should combine several reading strategies in the reading process, e.g., the formation of the opinion (pupils are encouraged to put forward hypotheses about what has been read) and pay more attention to promoting pupils' reading comprehension. Cooperative learning and discussions with peers about common reading can promote the understanding of the text and influence favourably those who are poor readers.

The experience of the authors of the present article shows that the teacher is the one who has the greatest role in the acquisition and promotion of literacy, including the teacher's ability to solve the reading difficulties in a practical way based on the research findings, to find new and innovative solutions by reviewing the previous experience.

Pupils, who have reading difficulties, sometimes, lack motivation to do reading or to continue reading because they do not feel and experience success when participating in literary activities. Pupils having poor literacy skills consider reading to be an exhausting and monotonous activity.

Several studies (Linnakylä, Malin, 2004; Geske, Grīnfelds, 2010) point out that one of the reasons of pupils' low literacy level is their non-involvement in reading. The risk increases if the texts chosen by the pupil for reading are uniform, of the same kind and level.

Motivation is one of the most impressive means for ensuring pupils' success in reading (Crismore, 2000).

Providing reading matter that corresponds to pupils' age; which is topical and diverse plays a significant role in the promotion of reading motivation. Studies indicate that readers who experience difficulties show considerable cognitive abilities, perseverance and work if the text agrees with their abilities and personal interest. And vice versa- a gifted pupil can show poor cognitive abilities and low motivation working with the text that is too complicated or personally indifferent (Ivey, 1999).

The theoretical background of the authors' study are the theories that put forward a central organizing motivational construct with proposed environmental supports. First, self-determination theory suggests that intrinsic motivation, consisting of self-direction and positive affective involvement and creates behavioural engagement in reading (Ryan, Deci, 2009). This actually means that when teachers encourage pupils to give input in learning and link their interests to learning activities pupils' commitments (motivation) and participation (engagement) are expected to increase which enhances their achievement (Reeve, 2012). Second, expectancy- value theory (Eccles, Wigfield, 2002) places the motivational construct of value at the centre of its formulation. In reading, value is the perceived importance of reading which may encompass the utility benefits or intrinsic merits of reading. The individual's value for reading predicts academic success and involvement which is expressed in the form of behavioural engagement in reading (Durik, Vida, 2006). Third, socio-cognitive theory (Bandura, 2001) presents self-efficacy as a driving motivational construct that influences the individual's aspirations, resilience and self-regulated activity (Schunk, Mullen, 2012). The fourth is the activity theory (Leontiev, 1981) which emphasizes shared cognitive activity. This is actually based on L.S. Vygotsky's (Vygotsky, 1978) view of collaborative scaffolding in the zone of proximal development. As indicated by K. Gutierrez and D.C. Lee (Gutierrez, Lee, 2009) the collaboration between teachers and pupils and among pupils empowers pupils to acquire literacy practices, in other words, it influences pupils' reading motivations and engagement. However, in the absence of personal connections, pupils' engagement declines leading to disengagement (Griffiths, Lilles, 2012).

Peer learning is a kind of cooperative learning where pupils' reciprocal interaction has a particular importance. Cooperative learning is active, independent and social learning. Cooperative learning forms are concentrated on pupils; the teacher actually moves to the background because he/she becomes the consultant, the one who guides the process. In the case of the cooperation of two pupils there is less possibility to avoid participation in the learning process as it is in the groups with more pupils.

The aim of peer learning is to increase pupils' active participation in the learning as well as the possibilities of providing the feedback. Using the peer learning the involved pupils are ensured academic, emotional and social benefits. The use of peer learning encourages classmates to help each other with better acquisition of the material, to consolidate skills and to practice what has been learned. This is a reciprocally interdependent process in which each pupil depends on the others as well as every pupil has to be an active participant in order to facilitate the learning process (Falchikov, 2001).

Table 1

Four reading activities of PLDRL: a detailed description in the time schedule

Nr.	Reading activities	Description	Time schedule
1.	Reading in a pair	Pupils read in a pair one text one after the other. The first to read is the pupil whose reading level is higher. Each pupil reads for 5 minutes. While one pupil reads the text aloud the other is listening and follows the correctness of what has been read. The moment the reader makes a mistake the other pupil stops him/her and asks to read once more –correctly. If the reader repeats the mistake, he/she can ask the listening pupil for help, to read correctly the word that has caused difficulties.	3 weeks (9 lessons)
2.	Retelling	Pupils read in a pair. After reading they retell each other the main events in two minutes. The first to retell is the pupil with higher reading level, the other pupil asks questions about what has been read as well as encourages to find the forgotten information in the text and to read it out. Then the second pupil retells the text. After reading pupils retell successively the text (events, actions) finding details, information in it.	3 weeks (9 lessons)
3.	Summa-rizing	Pupils read the text by paragraphs in a pair. After reading each paragraph the pupil mentions the key word (words) and makes the summary about the read paragraph in no more than 10 words. The first to make the summary is the pupil who has a higher reading level.	2 weeks (6 lessons)
4.	Prediction	Pupils read the text for 3 minutes. After that based on the previous reading they predict the further development of events. Then they continue reading the next part of the text to verify the expressed prediction.	3 weeks (9 lessons)

Children and adolescents that are defined as peers have the same or a similar development degree corresponding to their age; their interaction is based on the fact that each as an individual gives approximately the same contribution without taking a dominant status, and both have equal status in the educational institutions. (Salisch, 2000) The most successful pupils serve as a model for less successful pupils in the peer learning process (Fuchs, Fuchs, 2001).

The theoretical basis of the program "Peer learning for the development of reading literacy" (hereafter in the text – PLDRL) are the theories about *Reasoned Action* (Ajzen, Fishbein, 1980), theory of Innovation Diffusion (Roger, 1995), Social Learning Theory (Bandura, 2001, Ormrod, 1999); studies on the impact of peer learning on the development of literacy and studies of the development of literacy (Geske, Grīnfelds, 2010).

The PLDRL methodology is based on the program developed in the United States- "*Peer-assisted Learning Strategies" (PALS*). Its practice is scientifically grounded and researched for fifteen years.

PALS is a program specifically intended for promoting the reading competence and the comprehension of the read text. It has been developed by L. Fuchs and D. Fuchs together with their colleagues and teachers in 1997.

The result of implementing PLDRL is also pupils' skills to assess their peers' reading land to see one's own growth and that of other pupils.

The methodological basis of PLDRL is implementation of four successive reading activities observing the recommended time schedule. The implementation process is envisaged for 12 weeks including pupils' work in a pair, four activities for promoting the development of pupils' literacy, assessment of peers' literacy and fixing the dynamics of growth.

In order to attain the result of PLDRL it is important to implement each activity in accordance with the provided methodological description, including the planning of PLDRL lessons, adjusting and equipping the classroom, preparing of the materials as well as acquainting pupils with the PLDRL procedure and their responsibilities (Kalve, Margeviča, 2013).

PLDRL envisages four successive activities developing reading (literacy) (Table 1).

Methodology

The study was carried out in the time period from September 2012 till December 2014.

In academic year 2012/2013 PLDRL was approbated in 23 schools in Grades 5 – 7 (23 – Grade 5, 31– Grade 6 and 13 – Grade 7).

In academic year 2013/2014 PLDRL was approbated in 26 schools in Grades 5 – 7 (27 – Grade 5, 29 – Grade 6 and 21– Grade 7).

53 teachers of Latvian and the mother tongue (L1) and Latvian as the second language (L2) and 784 pupils participated in the approbation in academic year 2012/2013.

In academic year 2013/2014 the participants of the approbation were 64 teachers representing different school subjects and 960 pupils.

SWOT analysis and interviewing of teachers in the project European Social Fund Project "Development and implementation of the support programs for establishing the support system for the young people under the exclusion risk" (Agreement Nr.2010/0328/1DP/1.2.2.4.1/10/IPIA/VIAA/ 002) schools were used.

The study used qualitative research methods. A semi-structured, individual interviewing method and SWOT analysis were used for the data collection.

In order to find out the opinion of the involved teachers about the results of implementing the PLDRL program semi-structured or relatively open interviews were used that allowed performing a more profound interviewing in particular questions. A relatively open interview helps to explore teachers' subjective experience and find its formation in the context of the research questions.

The interviews lasted from 15 to 20 minutes. The obtained information was summarized using the qualitative content analysis the aim of which was to determine the importance of the narrative going deeper into its content.

Main ideas of each interview were represented in summaries presenting the respondent's opinion.

Pilot sample coding was applied for testing the clarity and consistency of categories. (Kroplijs, Raščevska, 2010). After coding of the data samples, coding consistency was tested comparing the results of all three authors of the study- the encoders.

Based on the content units, the authors of the article point out the following main categories and clusters of notions that structure the analysis of the interviews: teachers' opinion about the results of implementing PLDRL in general education.

The following criteria were put forward for the interview:

- PLDRL program for promoting the reading motivation;
- PLDRL program for developing pupils' literacy;
- PLDRL program for promoting cooperation;
- PLDRL program for teachers' professional development.

The authors of the article used the SWOT (strengths, weaknesses, opportunities, threats) analysis to identify in a systematized way the impact of internal and external factors on successful implementation of PLDRL. The SWOT analysis, which was based on the information, obtained during the study, allowed the authors find out the strengths and weaknesses of the PLDRL program as well as the possibilities for its development and quality improvement.

SWOT analysis was performed in November 2014 after the introduction of PLDRL. A questionnaire was used as the research tool. The questionnaire consists of four questions that helped to find out the teachers' opinion about the factors that influence the introduction of PLDRL. The questionnaire included open questions to which 117 respondents could freely express their opinion.

The questions included in the questionnaire are the following:

- What are the strengths of the PLDRL in your school?
- What are the weaknesses of the PLDRL in your school?
- What are the opportunities of the PLDRL in your school?
- What are the threats of the PLDRL in your school?

Results and discussion

Summarizing and analyzing the respondents' opinion expressed in the interviews about the development of pupils' reading skills while implementing PLDRL in general education the authors of the study conclude that PLDRL reading activities have most influenced the speed of pupils' reading, correctness and text comprehension. 34% of teachers emphasize as an essential benefit that pupils' writing skills have also improved in the context of developing the reading literacy. 12% of respondents indicate that the reading skills of those pupils who had serious learning problems have developed. According to the opinion expressed by 29% of teachers the most difficult of the PLDRL activities are the retelling and prediction, especially in schools implementing the minority education programs. This is due to pupils' insufficient knowledge of the Latvian language that makes the successive retelling of the text and expressing predictions more difficult. 78% of teachers acknowledge pupils' interest in reading texts in different school subjects that influences positively the acquisition of the content of these subjects as a positive gain from the PLDRL program.

82% reveal that improved literacy results also in the change of attitude to reading. Teachers who suggested pupils choosing their own books for reading indicate that adolescents more willingly participate in the discussions about books; they want to learn more about the books their classmates are reading. Teachers also express a view that boys more actively participate in reading.

69% of teachers indicate that starting the PLDRL activities majority of pupils participated in reading with interest because the reading process itself was exciting for them.

95% of respondents admit that PLDRL is a program which truly promotes the development of literacy and therefore is topical. However, 5% of teachers express worries that the implementation of PLDRL reading activities require much work and they, in their opinion, "shorten" the time that is allotted to the acquisition of the learning content in lessons. The interviewees express the opinion that it is difficult to pair pupils taking into consideration each pupil's reading achievement.

47% of teachers reveal in the interview that starting the PLDRL program they observed all its requirements but in the second stage of the program they started adjusting it to the needs of their pupils. For instance, organizing the pair work they did not take into account each pupil's reading results (pupils themselves choose the pair), the pairs were not changed as well as the points were not counted. The authors of the study emphasize that a prerequisite for a successful implementation of PLDRL is a systematic implementation of activities and observance of rules. 54% of respondents indicate that when starting the introduction of PLDRL they faced difficulties how to integrate the

PLDRL program in the content of the teaching/learning process (planning of the time, acquisition of the learning content, organization of learning, assessment, providing support). 36% of these 54% of respondents indicate that approximately in the third week of implementing PLDRL most of the above mentioned difficulties were overcome.

63% of teachers mention possibilities of promoting diverse cooperation experience using the pair work as a successful aspect of PLDRL, especially indicating the usefulness of changing pairs after every 3 weeks. Teachers consider that work in a pair where the better reader serves as a support for the weaker one promotes pupils' willingness to help their peers and facilitates the formation of friendly relations in the class.

19% of teachers have observed problem situations- pupils did not want to work in a pair with peers who have special needs or classmates who come from social risk families. These teachers admit that they do not know how to solve such situations and that such situations arise also in other subjects.

It was indicated in 1.7% of cases that pupils did not want to work in a pair with the best readers in the class because then they could not receive more points that the peer. Almost all respondents indicate that during PLDRL lessons the atmosphere is positive and pupils are interested in active participation.

Analyzing the opinion expressed by teachers in the SWOT survey (Table 2) it is seen that internal and external factors hindering successful implementation of PLDRL in practice are the following: teachers' great load, difficulties to accept the new reading activities, pupils and teachers' motivation to implement the PLDRL program, the lack of time and resources.

Table 2

SWOT analysis of teachers' opinions about factors that influence the implementation of PLDRL

	Internal Factors		**External Factors**	
	Strengths	**Weaknesses**	**Opportunities**	**Threats**
Support and material stimuli	Support material for implementing PLDRL in school is available. Lectures and seminars on PLDRL program are available. PLDRL is intended for each pupil.	It is impossible to provide enough copies of the necessary material. There is no place where to keep pupils' folders. Great number of pupils in the class.	Involvement of other grades/schools in the acquisition of PLDRL.	Lack of support from colleagues and school administration for the implementation of educational innovations. Additional unpaid work for teachers. Lack of material stimuli that would promote teachers' motivation to try out new teaching and learning methods and strategies.

	Internal Factors		External Factors	
	Strengths	**Weaknesses**	**Opportunities**	**Threats**
Methodological possibilities	Methodological possibilities have broadened. The lesson has become more interactive, pupils work themselves/more independently. Good, encouraging reading training. Pupils' reading speed increases. Pupils' reading literacy, joy of reading is promoted. The spirit of positive reading competition emerges. It allows overcoming the language barer for minority pupils.	Pupils with special needs have difficulties to participate in reading activities. At the beginning it is difficult to get used/find time in the lesson for reading, PLDRL activities. Pupils' insufficient initial reading skills and the knowledge of the Latvian language to perform PLDRL activities. Teachers lack the experience how to manage peer learning. Loud reading disturbs the others. Fear that the planned learning content will not be acquired.	Acquisition and creative adaptation of the foreign experience in implementing different literacy promotion programs.	Stereotypes on what a lesson should be like. Routine in teachers' work and unwillingness to introduce pedagogical innovations in the teaching/learning process. Violation of rules when organizing PLDRL reading activities. Teachers' limited possibilities (only in the frame of the project) to acquire the PLDRL program.
Motivation	Motivation to show better reading results, first in PLDRL activities, then on the whole (the willingness to achieve better results), increases. PLDRL promotes not only literacy but also pupils' cooperation. Positive psychological climate that motives pupils to participate is observed in PLDRL lessons.	Part of pupils lack learning motivation. Pupils' have unserious attitude. Teachers' unwillingness to participate in the implementation of the program.	Motivating pupils and their families to read at home together. Parents have started to show more interest in their children's reading results and the ways of improving them. Parents are motivated to learn more about books that their children's peers are reading.	Stereotypes that pupils dislike reading and that teachers are unable to change this situation. The passive attitude expressed by teachers of other school subjects and their lack of understanding that reading skills are to be developed in every subject.
Cooperation	Pupils' cooperation skills improve. Pupils learn to see their own achievement and that of others. Pupils learn to assess themselves and others.	Pupils not always want to cooperate with other pupils.	Teachers have the opportunity to work in a team.	Teachers lack the experience and skills of team work. Due to the number of pupils in the small rural schools it is impossible to organize group work.

Findings of the SWOT analysis prove that the implementation of PLDRL is influenced by the following external factors: lack of material stimuli (teachers' remuneration, possibilities of copying

texts, unsuitability of the classroom for PLDRL activities, the number of pupils in the class) and stereotypes about the lesson.

Internal factors: pupils' reading motivation, pupils' cooperation skills, pupils' empathy skills and willingness to observe rules; teachers' motivation and pedagogical mastery.

The outcomes of the study performed by the authors of the article actually lead to similar conclusions as expressed in the theoretical literature. The authors of the article have observed in their study concerning peer learning programs the learning benefits, including learning outcomes, which are increased activity of pupils' participation and the possibility of giving answers in contrast to the situation when the teacher works frontally with pupils thus helping them acquire the learning content or organises the pupils' individual work. This observation has been made also by other authors (Salisch, 2000; Fuchs, Fuchs, 2001).

Theoretical sources indicate that peer learning has been studied in several school subjects, especially in social sciences, in the acquisition of literacy. The authors of the article agree with other researchers that peer learning is implemented effectively also in the classroom with pupils who have different learning needs, e.g., pupils with special needs and pupils for whom the language of the instruction is the second language as it was in the case of the authors' study. Researchers and teachers have observed that peer learning programs ensure consistent academic achievement. Our study showed that pupils performing the role of the pupil-expert also benefit. The study outcomes also allowed the authors concluding that social benefits that include improvement of the self-assessment and self-confidence, better attitude to school and better mutual relations are social gains of peer learning which coincides with the conclusions made by other authors (Rohrbeck, Ginsburg-Block, 2003) often indicated as social gains of peer learning.

Conclusions

The analysis of the interviews allows concluding that the majority of teachers are interested in the implementation of PLDRL because they see a possibility to improve pupils; reading skills in it. Pupils, according to teachers, are interested because PLDRL activities have not been used before; they intend the reading of different texts; it is possible to gain positive experience of cooperation.

Authors used a SWOT analysis to assist teachers in initiating a meaningful change in literacy teaching process and to use the data for PLDRL improvement in general education. Strengths and weaknesses are revealed and adjustments to the curriculum, reading activities, etc., are justified. Understanding the strengths, weaknesses, and opportunities of the PLDRL, especially of the category "teachers", "pupils" and "teaching/learning process" can enrich teachers' understanding of the program and teach in a more efficient way and help the learners cooperate better and become aware of their reading.

When introducing the PLDRL program the following internal and external factors should be taken into consideration: material and technical resources, teachers' load, teachers and pupils' motivation, the number of pupils in the class, teacher's pedagogical mastery. The researchers concluded that the implementation of PLDRL has more strengths than weaknesses.

Summarizing and analyzing data obtained in the study it is possible to conclude that regular training performed in PLDRL reading activities has, on the whole, improved pupils' literacy as well as has influenced positively the reading motivation. Purposefully organized work in pairs has promoted the improvement of pupils' cooperation skills. The introduction of PLDRL has influenced positively the content acquisition of the school subjects. PLDRL facilitates the formation of pupils' diverse cooperation experience. Work in a pair encourages the formation of friendly relations in the class. PLDRL is a program motivating reading because doing the reading activities pupils quickly see the results of reading.

Bibliography

1. Ajzen I., Fishbein M. (1980). Understanding attitudes and predicting social behavior. Engelwood Cliff, NJ: Prentice – Hall.
2. Anspoka Z. (2008). Latviešu valodas didaktika (Didactics of the Latvian language). Rīga, Raka, 210.lpp. (In Latvian)

3. Bandura A. (2001). Sociocognitive theory: An agentic perspective. *Annual Review of psychology*, psych.52. *52*, 1-26.doi:10.1146/annurev.psych.52.1.1
4. Crismore A. (2000). Helping ESL and EFL university students read critically: A 2000 challenge. *Eric Document Reproduction Service*. No. ED450592.
5. Durik A.M., Vida M., Eccles J.S. (2006). Task values and ability beliefs as predictors of high school literacy choices: A developmental analysis. *Journal of Educational Psychology, 98* (2), 382-292.doi:10.1037/0022-0663.98.2.382.
6. Eccles J.S., Wigfield A. (2002). Motivational beliefs, values, and goals. *Annual Review of psychology,53,*109-132.doi:10.1146/ annurev.psych.53.100901.135153.
7. EU High Level Group of Experts on Literacy. Final Report. September, 2012. [online] [10.11.2014]. Available at http://ec.europa.eu/education/policy/school/doc/literacy-report_en.pdf
8. Falchikov N. (2001). Learning Together. Peer Tutoring in Higher *Education*. London, Routledge Falmer.
9. Fuchs D., Fuchs L S., Burish P. (2001). Peer assisted learning strategies: An evidence based practice to promote reading achievement. *Learning Disabilities Research & Practice*, 15 (2) p. 85-91.
10. Geske A., Grīnfelds A., Kangro A., Kiseļova R. (2010). Ko skolēni zina un prot - kompetence lasīšanā, matemātikā un dabaszinātnēs: Latvija OECD valstu Starptautiskajā skolēnu novērtēšanas programmā 2009. (What students know and are able to do- competence in reading, mathematics and science: Latvia in the OECD International Students'assessment program 2009). LU PPMF, Rīga, 10, 13, 19, 75 lpp. (in Latvian)
11. Griffiths A.J., Lilles E., Furlong M.J., Sidhwa J. (2012).The relations of adolescent student engagement with troubling and high-risk behaviours. In S.L. Christenson, A.L. Reschly, C. Wylie (Eds). *Handbook of research on student engagement* (pp.563-584). New York, NY, Springer.
12. Gutierrez K., Lee C.D. (2009). Robust informal learning environments for youth from non-dominant groups: Implications for literacy learning in formal schooling. In L.M. Morrow, R. Rueda.
13. Ivey G. (1999). A Multicase study in the middle school: complexities among young adolescent readers. *Reading Research Quarterly*, 34, Nr. 2, p. 172-192.
14. IZM (2014). 2014./2015.mācību gada aktualitātes un jaunumi izglītībā (Topicalities of the academic year 2014/2015 and latest news in education) [online] [15. 10.2014]. Available at http://izm.izm.gov.lv/upload_file/2014/aktualitates/Aktualitates_250814.pdf (In Latvian)
15. Kalve A., Margeviča I., Papule E. (2013). Vienaudžu mācīšanās lasītprasmes attīstībai (Peer learning for the development of the reading literacy). *Rokasgrāmata skolotājiem.(Handbook for teachers).* Rīga, Latvijas Universitāte. 108.lpp. (in Latvian)
16. Kroplijs A., Raščevska M. (2010). Kvalitatīvās pētniecības metodes sociālajās zinātnēs (Qualitative research methods in social sciences). 2.izd., Rīga, RaKa, 167.-170.lpp. (in Latvian)
17. Leontiev A.A. (1981). Speech and communication. In C.V. James (Ed.) *Psychology and the language learning process*. Oxford, England, Pergamon, pp.21- 28.
18. Linnakylä P., Malin A., Taube K. (2004). Factors behind low reading literacy achievement. *Scandinavian Journal of Educational Research*, 48, Nr. 3, p. 231-250.
19. Ormrod J. E. (1999). Human Learning. Upper Sadle River, New York, Merrill Prentice Hall.
20. Reeve J. (2012). A self-determination theory perspective on student engagement. In S.L. Christenson.
21. Roger E.M. (1995). Diffusions of innovations. New York, The Free Press.
22. Rohrbeck C.A., Ginsburg-Block M.D., Fantuzzo J.W., Miller T.R. (2003). Peer-assisted learning interventions with elementary school students: A meta-analytic review. *Journal of Educational Psychology*, Nr. 94,pp. 240–257.
23. Ryan, R.M., Deci, E.L. (2009). Promoting self-determined school engagement: Motivation, learning, and well-being. In K.R. Wenzel & A. Wigfield (Eds). Handbook of motivation at school (pp. 171-195). New York, N.Y, Routledge.
24. Salisch M. (2000). Zum Einfluss von Gleichaltrigen und Freunden auf die Presonlichkeitsentwicklung. (The influence of peers and friends on the personality). M. Amelang (Hrsg.) *Determinanten individueller Unterscheide.* Gottingen, Hogrefe Verl. Fur Psychologie, S. 345 – 405. (In German)
25. Schunk D.H., Mullen C.A. (2012). Self-efficacy as an engaged learner. In S.L. Christenson, A.L. Reschly, & C. Wylie (Eds). *Handbook of research on student engagement.* New York, NY: Springer, pp.219-235.
26. Vygotsky L.S. (1978). *Mind in society. The development of higher psychological processes* Cambridge, M.A., Harvard University Press.

Improvement of Accessibility of Higher College Education in Lithuania Applying Forms of e-Learning

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Abstract: The article analyses how the diversity (different types of institutions, study forms and modes) enhances accessibility of college higher education to students as well as to society, whose members aim at professional development or retraining. Though the students' attitude towards distance studies and possibilities of distance learning in different colleges has been intensively investigated in recent works of researchers, the role of distance studies as a means of professional development or retraining for society has been under-researched. The goal of the article is to analyse improvement of access to higher college education in Lithuanian applying a variety of e-learning forms. The reach data were obtained employing method of scientific literature and documents analysis, and qualitative research method: written survey. To validate the data of internet website analysis, the questionnaire survey of 23 college staff members in charge of distance studies/studies was additionally carried out in 2014 and the data were received from 10 colleges. Taking into consideration the results of the conducted analysis of documents, literature, internet websites and survey, recommendations for improvement of e-learning activities seeking to address requirements imposed on higher education, developing students' competences and ensuring the paradigm of life-long learning are proposed. Generalising, it can be stated that accessibility of higher education is improved employing a wider variety of e-learning forms.

Keywords: college higher education, accessibility, distance education.

Introduction

Traditionally higher education was separated from society for a long period of time and approached as an autonomous institution. However, since the middle of the 20th century, the society itself has set out its various requirements to higher education as a social institution, which have been predetermined by tendencies in development of knowledge (information, technologies) society. Higher education under influence of various social factors and responding to their pressure has become mass rather than elite phenomenon and, thus, has provided different society strata with a better access to it.

The paradigms of knowledge society and mass science have resulted in diversification of higher education: higher education institutions, which targeted at different missions, were established and colleges, non-university higher education establishments, started functioning beside universities, which offered a wide range of study programmes focused on professional qualification. The diversity of missions of the governments of many countries and training possibility, which is determined by social factors, is evaluated and acknowledged as public benefit (Hazelkorn, Huisman, 2008).

The diversity is one of the key factors, which predetermines efficiency of the system of higher education, social mobility and innovation, creates close relations with society and the labour market and fulfils their expectations. According to Frans van Vught (Vught, 2008), the variety is most beneficial to the labour market as it responds flexibly to and addresses needs of its institutions. Taking into account the fact that the importance of higher education to economic development and social development has been strengthening, knowledge society has to pursue extensive collaboration among different groups (government, society, business and science). All the roles are necessary and all partners need each other to ensure success of processes (Reinhartsen, 2003 cited by Vukasović, 2003). R. Želvys (2003) states that education is influenced by the conception of free market and educational institutions more and more often offer their services. Innovations have to be applied in the knowledge society making attempts to maintain close collaborative relations with labour market institutions.

Thus, the article analyses how the diversity (different types of institutions, study forms and modes) enhances accessibility of college higher education to students as well as to society, whose members

aim at professional development or retraining; it also discusses principles, similarities and differences of organisation and implementation of distance studies as one of the most innovative study forms in private and state colleges.

It is emphasised that having analysed the works by Lithuanian researchers it may be stated that distance studies for professional development or retraining are in great demand. According to D. Jurgaitis, D. Kaklauskienė, L. Kaklauskas (2003), who conducted students' opinion survey, 6.3% (27 out of 510) of the respondents expressed a negative attitude to distance studies, whereas 57.4% (293 out of 510) of them demonstrated a positive attitude and 240 (32%) of the students in the survey did not provide any answer to this question; more than half of the respondents support colleagues, who are students of distance studies. Thus, it can be concluded that favourable social environment is created for retraining, which encourages development of an employer applying methods of non-traditional studies. The Report on Assessment of Quality of Distance Studies in Lithuanian and Foreign Higher Education Schools (Janilionis, Abarius…, 2006) also indicates that pursuing better accessibility of studies and enhancement of professional qualification of the labour market actors, inevitably distance learning becomes one of the most acceptable forms of learning. In 2007 the research on needs of providers of distance learning services and on learning motivation of students of distance studies was conducted (Rutkauskienė, Butkevičienė, 2007; Mušankovienė, 2007) and its results showed that the main goals of individuals learning remotely include plans to develop professionally, to seek career advancement, to obtain diploma, to get education in general, to train for profession and to acquire a speciality.

Having conducted research, M. Teresevičienė, V. Zuzevičiūtė (2007) and others pointed out that the respondents are mainly motivated to learn remotely by the provided opportunities to manage own time more flexibly, to study only what is interesting and useful, to study in a convenient place and at desirable pace and, thus, to develop their skills and abilities. Three fourths of respondents pointed out that they were satisfied with courses. The attitude of elder respondents towards perspectives of distance learning in Lithuania is most optimistic. A. Rutkienė, E. Trepulė (2009) state that application of distance teaching or its elements in the system of adults education would expand possibilities of development of study programmes and application of modern teaching methods, would improve accessibility of learning as well as bring learning closer to learners.

Though the students' attitude towards distance studies and possibilities of distance learning in different colleges has been intensively investigated in recent works of researchers (Giedrimienė, Donielienė, 2010; Klapatauskienė, 2008; Tautvydienė, 2008; Kiaunienė, 2008; Pūstelninkas, 2009), the role of distance studies as a means of professional development or retraining for society has been under-researched.

Methodology

The goal of the article is to analyse improvement of access to higher college education in Lithuanian applying a variety of e-learning forms. The reach data were obtained employing method of scientific literature and documents analysis, and qualitative research method: written survey. In 2014 23 colleges were functioning in Lithuania: 13 state and 10 private higher education institutions. To validate the data of internet website analysis, the questionnaire survey of 23 college staff members in charge of distance studies/studies was additionally carried out from September to October 2014 and the data were received from 10 colleges: 6 state and 4 private institutions. Taking into account that a number of colleges do not implement distance or blended studies, it can be stated that the number of the respondents exceeded 50 percent.

Results and discussion

Aspects of college establishment to increase accessibility as reflected in documents and Lithuanian legal acts. The beginning of foundation of non-university higher education sector is related to Lithuania's joining of the Bologna process in 1999 (What is Bologna…, 1999) and attempts to integrate into the European higher education area. The structural changes in higher education, i.e., establishment of the college sector, facilitated more flexible and open responsiveness of higher education to society needs.

Analysing the Regulations of Preparation for Establishment of Colleges (Regulations of Preparation…, 1999), the tendency to have private colleges in the system of Lithuanian higher education was clearly observed because a number of exceptions in the criteria of the structure of college network, size of colleges (minimal number of students), study fields were made aiming to establish private non-university higher education institutions. This created prerequisites for diversification of the non-university higher education sector with colleges of two types (state and private), which not only promoted competitiveness but also better satisfy needs of society to pursue higher education. The indicator of availability may be improved not only applying the principle of regionality but also introducing innovative means i.e., distance teaching, whereof importance is emphasised in the White Book (The White Book…, 1999).

It should be pointed out that having established the first colleges and having approved the strategic documents of higher education policy, the majority of them underlined the importance of distance studies. The key priorities of higher education policy were presented in the publication "Education Guidelines: Lithuanian Education Development Strategic in 2003–2012. Draft." (Švietimo gairės..., 2002), which served as basis for the provisions of the National Education Strategy 2003–2012 (Provisions of the National..., 2003) and were coordinated with other national and European strategies and reforms as well as with priorities of European Union education policy. The Educational Guidelines (Švietimo gairės..., 2002), presupposes five main principles of educational system development: accessibility, contextuality, efficiency, continuation and diversity The Educational Guidelines (Švietimo gairės..., 2002), and the National Education Strategy 2003–2012 (Provisions of the National..., 2003) provide for several important objectives of the system of higher education: to create a system of constant coordination of specialist training and labour market, to develop the diversity of adult education forms that are accessible to each individual (extramural, part-time evening, distance studies) emphasising the importance of continuous learning. Implementation of distance learning is also underlined in the Programme of Implementation of the Provisions of the National Education Strategy 2003–2012 (Dél vakstybinés švietimo…, 2005).

The first analyses The Report of the Implementation of the Provisions of the National Education Strategy 2003–2012 in 2003–2006 (summary) (Valstiybinés švietimo…, 2006) revealed a progress in the college education sector, which is seen as a natural developmental process mostly initiated by the academic community itself. Firstly, the availability of various forms and modes of studies (individual study programmes, non-consecutive and bridging studies, extramural, evening and distance studies) to society is emphasised. It is stated that diversified system better serves the paradigm of lifelong learning: the diversity of study institutions and forms ensures satisfaction of various higher education needs of society.

It should be emphasised that the programme Information Technologies for Science and Studies (2001–2006) was launched in accordance with the Order of the Minister of Education and Science of RL 30 January 2001; No. 115. (The Programme Information ..., 2001). The programme consists of three closely interrelated components: Lithuanian Scientific and Study Information System (LieMSIS), the Lithuanian Distance Learning Network (LieDM) and the Lithuanian Academic Libraries Network (LABT). This programme significantly contributed to development of distance studies in higher education institutions and provided a starting point for organisation of distance professional development courses for society. In 2005 the Strategy for Development of Distance Learning Network was approved, which emphasised collaboration and links of various institutions at regional, national or European level, strengthening of collaboration between public and private sector. The Order of the Minister of Education and Science of RL No. ISAK-791 of 27 April 2007 approved the Programme of Lithuanian Virtual University for 2007–2012 (Lietuvos virtualaus..., 2007). Employing the accumulated experience and the infrastructure of information technologies, it aimed to develop Lithuanian Virtual University by joint effort of institutions, which would function following the network model and assist institutions in their development of activities in the virtual space providing services to people of Lithuania and competing in the world markets.

However, implementation of distance studies in the sub-system of higher education has not been widely and specifically legally regulated. The Description of Full-time and Part-time Studies approved by Order No.ISAK-1026 of 15 May 2009 (The Description…, 2009) provide only a mere reference

that “Contact work may be implemented remotely”. Thus, higher education institutions define the procedure of distance studies by their internal documents that regulate the study process.

Practical aspects of organisation of distance studies in colleges. To identify the extent to which information on opportunities of distance studies in colleges is accessible to society, how such studies are implemented, what is their focus, the internet websites of college higher education institutions were analysed. It should be emphasised that a wide variety of courses and seminars are offered in all state colleges developing the paradigm of life-long learning, creating conditions for working people to acquire needed knowledge, to improve or change the obtained professional qualification, actively involving in retraining of the unemployed, enabling specialists to retain competitiveness in the labour market, etc. However, if all the state colleges announce the information about the organised courses to society, no such information is available on the websites of four private colleges and it may be concluded that such services are not provided.

The results acquired after the analysis of the internet websites of colleges may be divided into four groups.

1. *Provision of services to society using various forms of distance learning.* Clear and easily accessible information oriented to society in the region is announced only on the website of one state regional college (out of 13 state colleges): it is announced that professional development services are provided in this institution and that learning material has been specially prepared for courses. Distance Studies Centre is set up in the institution "to expand collaboration of higher education schools in the sphere of studies and to create the system of distance learning in Lithuania that is based on newest technical equipment of telecommunications, allows to use the most modern teaching/learning technologies and integrates Lithuanian citizens into information society". In the college students have access to virtual learning environment (open source learning platform Moodle), video conferences are organised using special equipment; various events for society (conferences, seminars, meetings) are broadcast through network of video conferences; records may be viewed at convenient time using Video Conference Support System (ViPS). The website also informs that distance studies have been implemented in the college since 1999, when a classroom of distance learning as well as Distance Studies Centre were set up in the college implementing the project “Development of Distance Teaching in Lithuania (LieDM- 2)”.

It should be pointed out that different results were obtained after analysis of websites of private colleges: the number of private colleges, which implement distance studies, is bigger compared to state ones. Three largest private colleges, which strongly and to big extent involve in distance studies, perceive that only systemic and persistent work may bring desired results. Therefore, separate units, which are in charge of organisation, coordination and development of distance studies, are established in the colleges. Thus, professional development courses and consultations are also offered as distance services. It should be emphasised that one of all the colleges in Lithuania, ensures access even to the requirements for material of distance studies are, i.e., for their structure and content.

2. *Planned development of distance services to society.* Two regional colleges that are distant from the capital of the country have established separate centres, which organise and coordinate distance studies in the intuition and the region. Though the website of one of the colleges contains the following information that "currently the services are provided in two forms: real-time video conferences are held and distance courses in virtual environment are provided", further information is limited to various non-distance courses. It is important to emphasise that presenting their missions, both colleges announce their aims to strengthen their link with business companies, to become the centre of attraction in the region providing services of distance learning to society. Thus, regional colleges understand the benefit of distance studies ensuring implementation of lifelong learning conception. Students of these colleges have access to virtual learning environment Moodle and video lectures or even to use system of team work (First Class).

3. *Integration of distance learning into the traditional process of education.* Though seven state and five private colleges declare that they aim to integrate distance teaching into the system of traditional teaching, no units, which are in charge of centralised coordination of distance studies, have been set up and this process is integrated into activities of other units (research, studies, IT, etc.) Students have

access to virtual learning environment Moodle; in several colleges information is announced about opportunities to use visual video conferences. This system may be used not only for lectures but also for conferences, meetings, student counselling, oral accounting, presentations, etc and may provide a record an evidence of implemented activities. Training courses for society are organised by specially established units/centres or by responsible people in faculties.

4. *Distance studies are not organised.* Having discussed all the aforesaid groups of colleges, three specialised state and two private colleges (where specialised, practical study programmes are offered) should be singled out as they do not provide any information about accessibility of virtual learning environment to students. Moodle may be used in one of the specialised colleges, but learning environment itself has to be developed by teachers themselves. Such passive attitude may have been conditioned by the opinion of college administration and teachers that it is difficult to organise studies in the study field of technologies.

Analysing the data of survey, it can be stated that the students of the colleges, which provided data, may choose separate distance study subjects in their study programme, which allows to conclude that mainly blended studies are organised (blended studies refer to the mode of learning, when study material is delivered or contact work between students and teachers is implemented at least in part through distance means). Four colleges, which may be considered leaders in this sphere, are singled out as they state that organise distance studies and provide students with a possibility of studying the whole study programme. These data validate with the ones acquired analysing the internet websites of colleges.

The results of the survey reveal that students' attitude towards distance studies is positive (five state and three private colleges; in the rest of the colleges it is partially positive). According to V.Navickienė (2011), establishment of conditions for distance learning is an important criterion describing innovativeness of colleges (55.5 % - highly important 41.2 % - rather important; the sample: 397 students from various regional colleges). Establishing statistically significant values, only one significant difference was observed between opinions about distance services in colleges of the respondents from private and state colleges: created conditions for distance learning are highly important to 68.3 % and rather important to 27.6 % of the respondents from private colleges and this is highly important only to 50.3 % (rather important – 46.7 %) of the respondents from state colleges. Therefore, it can be concluded that distance learning is still an innovation to the respondents. However, the students, who have chosen private colleges probably due to more flexible conditions of studies, have to combine studies and work and this form of learning may be of importance to them.

Despite the clearly expressed demand for distance studies, the responses provided by the respondents indicate different reasons, which impede development of distance studies: firstly, it is related to specifics of study programmes. A number of the respondents think that study subjects in the area of technologies, biomedical or physical sciences are not adaptable to distance studies because of practical works and specifics of teaching tools ("Laboratory works are performed only in special laboratories, whereas professional training is carried out in workplaces, etc."). Secondly, insufficiently developed administrative staff members'/teachers' competences of distance studies organisation and management are observed; teachers are not able to use the full potential of virtual environments tailoring them to meet the needs of students of distance/blended studies. Thirdly, teachers' information communication technologies skills are underdeveloped. Fourth obstacle is lack of students' skills and motivation ("Strong motivation is needed to do everything on your own." "Students do not follow timetables and want to participate, when it is convenient to them but not when it is indicated by teachers."). Fifthly, the works and responsibilities are improperly distributed. The analysis of the research data disclosed that the biggest load of work is ascribed to a teacher organising and implementing the whole of the study process (data from three private and four state colleges). In two private and one state college the volume of work is distributed between the Distance Studies Centre and a teacher and the Centre even assumes the bigger proportion of workload. Such data confirm the aforesaid statements that work is more fluent and efficient when a teacher may rely on professional and ongoing assistance. Sixthly, private colleges face problems with accounting of workload: "Teachers in private colleges are usually part-time staff members and such work has to be paid additionally". Seventhly, the conducted work is not remunerated ("Since preparation of the module of distance studies is unpaid work, and it requires a

lot of effort, teachers are not interested in it. Elderly teachers are not eager to involve in development of such studies.")

More than half of the respondents agree that a lot of study subjects may be learn remotely but additional work of teachers and abilities to organise such studies employing all the possibilities of virtual environments are needed ("There exists a wide choice of IT tools, with the help of which all the activities in the classroom may be implemented remotely, including laboratory works. In fact, it may be complicated, expensive and inconvenient but it is possible." "Problems occur with study subjects of arts, which may also be taught as distance ones. However, a teacher should allocate a lot of time recording video lessons as well as work individually organising seminars as video conferences or employing other internet tools.").

Despite emerging problems or failures, the respondents provided the following insights about distance studies:

- better accessibility of study materials and saving of time;
- increase in variety of study forms and methods;
- possibility of organising and assurance of self-dependent work ("The decreasing volume of contact work and increasing volume of self-dependent work make blended learning or distance studies inevitable");
- demand is reflected in the increasing percentage of students, who ask about availability of distant studies and possibilities of active use of virtual learning environment ("I have never heard that anyone would have rejected such studies. Most frequently students themselves ask for such an opportunity and point out that it is convenient for them." "The surveys carried out twice a year reveal students' satisfaction with distance studies because more than 50% of them live abroad." "Students are used to social networks and to communication through them; therefore, such studies are quite natural to them").

One of the answers of the respondents presents a very comprehensive and precise explanation of benefit of distance studies as well as a direction for their possible development: "Pursuing better integration of distance teaching/learning and increase in the quality of teaching, it is necessary to promote collaboration of teachers, colleges and universities, to develop and share the created courses to provide students with more accessible learning material. Teachers should envisage not only additional work in the use of virtual study environment but also the benefit they actually get (they learn to apply latest technologies, have permanent storage for learning material and have access to it anytime and anywhere, can show recoded lectures or deliver them as video conferences). It would be perfect if as many as possible teachers could take part in development of MOOC courses. We are glad that this process has started."

Analysing the forms of distance learning applied in colleges, it should be emphasised that this initiative is strictly supported by administration only in two state and three private colleges, where teachers are obliged to place the goals, objectives and assessment criteria of study subjects in the virtual environment in the beginning of each semester. Only in one state college filmed materials of each lecture are available online. In one state and one private college no requirements are imposed on distance study environment and material – this is used only on initiative of teachers themselves.

Referring to distance courses organised to society, only one state college organises such courses and points out that they are more popular than usual (the acquired results validate with the results of the analysis of internet websites). One private college has plans to launch such courses in the nearest future. According to the opinion of the respondents from one state and two private colleges, there is no demand for distance courses. All the other colleges have chosen organising of courses in traditional form. On the basis of the research conducted by V. Navickienė (2011), it can be stated that courses offered by colleges are relevant and necessary to employers but the academic community of the college has to allocate time and efforts to attract society members to them. This is particularly important for colleges of biggest cities because regional colleges, being only institutions of this type in the region, establish closer collaboration with social stakeholders and other labour market institutions. It is obvious that training courses organised by academic community members of regional colleges are

known and necessary for employers, whereas there is no point in organising these activities in colleges in big cities or it has to be done very insistently or investing a lot into system of marketing.

Thus, the conducted analysis of the internet websites and the questionnaire survey disclosed that state and private colleges make attempts to improve accessibility of college higher education implementing distance studies, though other aspects for improvement may also foreseen.

Conclusions

The proposed distance studies and various e-learning forms (video conferences, Video Conference Support System, team work system FirstClass, MOOC courses, etc.) improve accessibility of college higher education studies to students and other individuals, who have ambitions to develop professionally or to get retrained and to remain competitive in the labour market. Such studies most frequently are necessary to working people, individuals living abroad or part-time students because they provide with a possibility of planning own time, combining of work and studies , choosing appropriate material, learning pace and place. Though college study programmes are more targeted at practical studies but employing opportunities of virtual environments, forms of e-learning and improving teachers' competences it is really possible to implement distance studies.

Aiming to introduce distance studies as widely as possible, support from administration of higher education school, establishment of goals as well as centres/units, which provide constant administrative, methodological and academic support to students and teachers developing and using virtual learning environments, various e-learning forms should be ensured. The acquired research data show that colleges, which have separate units in charge of planning, coordination, implementation and development of activities of distance studies, have achieved best results. It should be emphasised that emerging problems are solved much faster and more flexibly when close collaboration of centre/division of distance studies with teachers and college administration is ensured.

Generalising the research results it can be stated that college higher education institutions under-employ advantages of distance studies providing various services to society. Institutions are more oriented towards students but numerous scientific studies reveal that professional development seminars and courses as well as other activities are attractive and acceptable to society (employers, employees, unemployed, school learners). Therefore, colleges should invest more effort and search for ways how to strengthen the link with society carrying out the aforesaid activities.

Bibliography

1. Dél vakstybinés švietimo strategijos 2003-2012 metų nuostatų įgyvendinimo programos patvirtinimo (2005). (The Programme of the Implementation of the Provisions of the National State Education Strategy 2003–2012). (2005). Lietuvos Respublikos vyriausybé Nr. 82., Vilnius, p.29. [online] [20.01.2015]. Available at http://www.suaugusiujusvietimas.lt/lt/suaugusiuju-svietimo-bukle/teises-aktai/2010-06-29-valstybines-svietimo-strategijos-2003-2012-metu-nuostatu-igyvendinimo-programa/ (In Lithuanian)
2. Giedrimienė L., Donielienė I. (2010). *Šiaurės Lietuvos kolegijos studentų požiūris į nuotolines studijas* (North Lithuanian College Students Approach to Distance Learning). Studijos šiuolaikinėje visuomenėje (Studies in Modern Society). No. 1 ISSN 2029-431X, pp. 42-47. (In Lithuanian)
3. Hazelkorn E., Huisman J. (2008). Higher Education in the 21st Century – Diversity of Missions, *Higher Education Policy*, Vol. 21, No. 2.
4. Janilionis V., Abarius P., Denisovas V., Kjell-ÅkeHolmberg, Lukšaitė D., CarlosMachado, Šaltenienė E., Tamulevičius S., Vidžiūnas A. (2006). Nuotolinių studijų kokybės vertinimo Lietuvos ir užsienio aukštosiose mokyklose analizė (Analysis of Distance Learning Quality Assessment in Lithuanian and Foreign Institutions of Higher Education). Vilnius, SKVC. UDK: 37.018.43(474.5); UDK: 37.018.43(1-87). (In Lithuanian)
5. Jurgaitis D., Kaklauskienė D., Kaklauskas L. (2003). Nuotolinių studijų taikymo kvalifikacijos kėlimui sąlygos (Application of distance learning professional development conditions), *Pedagogika*, No. 69. ISSN 1392-0340 (In Lithuanian)

6. Kiaunienė J. (2008). *Nuotolinių studijų integravimas į studijų procesą Panevėžio kolegijoje* (Integration of Distance Learning in the Study Process in Panevezys College). Informacinių technologijų taikymas švietimo sistemoje 2008: e-studijų patirtis, aktualijos ir perspektyvos: straipsnių rinkinys (Application of Information Technologies in the Education System in 2008: the E-learning Experience, Current Issues and Perspectives: Collection of Articles). Kaunas, Kauno kolegija, ISSN 1822-7244. (In Lithuanian)
7. Klapatauskienė J. (2008). Nuotolinio mokymosi diegimo galimybės Klaipėdos verslo ir technologijų kolegijos Verslo fakulteto Kretingos skyriuje *(*Distance Learning Possibilities in Klaipeda Business and Technology College in Business Faculty of Kretinga Section). *Inžinerijos studijų inovacijos:* konferencijos mokslinių straipsnių rinkinys *(*Engineering Study Innovation: Conferences Collection of Scientific Articles). Klaipėdos verslo ir technologijų kolegija. Klaipėda, Klaipėdos universiteto leidykla. (In Lithuanian)
8. Navickienė V. (2011). *Koleginio aukštojo mokslo diversifikacija Lietuvoje*. (Colleges of higher education diversification in Lithuania) Doctoral Thesis, Vilnius, Vilniaus pedagoginio universiteto leidykla. (In Lithuanian)
9. Pūstelninkas R. (2009). *Nuotolinės studijos Marijampolės kolegijoje* (Distance Learning in Marijampole College). Švietimo ir kultūros sklaida: dešimtmečių patirtis ir dabarties iššūkiai: respublikinė mokslinė-praktinė konferencija, skirta mokytojų rengimo Marijampolėje 90-mečiui, Marijampolė: collection of articles. Marijampolė, Kolegijos leidybos centras. (In Lithuanian)
10. Regulations of Preparation for Establishment of Colleges (1999). (the Order of the Minister of Education and Science of the Republic of Lithuania No. 1260 of 22 December 1999 (Official Gazette, 22 March 2000, No. 24-632).
11. Rutkauskienė D., Butkevičienė E., Matulionis V. A., Mušankovienė V. R. (2007). *Nuotolinių mokymosi paslaugų teikėjų poreikių studija* (Distance Learning Providers Needs Study). Kaunas, Kauno technologijos universitetas (In Lithuanian)
12. Rutkienė A., Trepulė E. (2009). Nuotolinis suaugusiųjų mokymas(is) mokymosi visą gyvenimą kontekste (Remote training adults in the context of lifelong learning). Vilnius, *Acta paedagogica Vilnensia*, Vol. 23. ISSN 1392-5016. (In Lithuanian)
13. Švietimo gairės: Lietuvos švietimo plėtotės strateginės nuostatos 2003–2012 metai. Projektas. (2002). (Education Guidelines: Lithuanian Education Development Strategic in 2003–2012. Draft). Vilnius, Dialogas. (In Lithuanian).
14. Tautvydienė G. (2008). *Nuotolinės studijos Šiaulių kolegijoje: aktualijos ir perspektyvos* (Distance learning Siauliai College: Problems and Prospects). Informacinių technologijų taikymas švietimo sistemoje 2008: e-studijų patirtis, aktualijos ir perspektyvos: collection of articles. Kaunas, Kauno kolegija, ISSN 1822-7244. (In Lithuanian)
15. Teresevičienė M., Zuzevičiūtė V., Anužienė B. (2007). Analitiko kompetencijų tobulinimas ir jų taikymas organizacijose žmonių išteklių potencialo plėtrai skatinti (Analyst and Skills of Their Human Resources in Organizations to Promote the Development Potential). (In Lithuanian)
16. The Description of Full-time and Part-time Study Modes (2009). (the Order No. 1026 of 15.05. 2009).
17. *Provisions of the National Education Strategy 2003-2012.* (2003). Resolution. Parliament of the Republic of Lithuania. No. IX-1700. [online] [08.08.2014]. Available at
http://planipolis.iiep.unesco.org/upload/Lithuania/Lithuania_National_Education_Strategies_Provisions_2003-2012.pdf
18. The Programme *Information Technologies for Research and Studies 2001–2006*. (2001). (the Order No. 115 of 30 January 2001).
19. *Lietuvos virtualaus universiteto 2007–2012 metų programa* (2007). (The Programme of Lithuanian Virtual University for 2007–2012) (the Order No. ISAK-791 of 27 April 2007). [online] [15.10.2014]. Available at http://www.lvu.lt/cms/files/liedm/resources/3810_LVU_programa_keitimas0715.pdf (In Lithuanian)
20. The White Book on Higher Education in Lithuania: EU PHARE programme "Lithuanian Higher Education Reform" (1999). Vilnius, Ministry of Education and Science.
21. Valstiybinės švietimo strategijos 2003–2012 nusotatų įgyvendinimas 2003–2006 metais. (2006). (The Report on the Implementation of the Provisions of the National State Education Strategy 2003 –2012

in 2003–2006). (summary), p.24. [online] [15.01.2015]. Available at http://www.smm.lt/uploads/documents/Veikla_strategija/2003_2012_metu_Valstybin_%20svietimo_strategija/VSS%20ataskaita%2005-05.pdf (In Lithuanian)

22. Van Vught F. (2008). Mission Diversity and Reputation in Higher Education. *Higher education Policy*. Vol. 21(2), pp. 151-174. [online] [08.08.2014]. Available at http://doc.utwente.nl/73249/1/Vught08mission.pdf
23. Vukasović M. (2003). Student Perspectives on Higher Education as a Factor in the Founding of Knowledge Societies, *Higher Education in Europe*, Vol. XXVIII, No. 1, April
24. What is Bologna process? (1999). [online] [04.01.2015]. Available at http://www.eua.be/eua-work-and-policy-area/building-the-european-higher-education-area/bologna-basics.aspx
25. Želvys R. (2003). *Švietimo organizacijų vadyba* (Education organizations management). Vilnius, VU leidykla. (In Lithuanian)

Students' Readiness to implement an Integrated Discovery Study Model for Early School Age Pupils

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Abstract: A successful advance in education to a great extent depends on the experience obtained in primary school.The proficiency of both a teacher and a future teacher will determine if a pupil will learn with pleasure, develop life activity skills, or lose the natural inquisitiveness. The study process in primary school should be based on the cooperation between teachers and pupils, the development of critical and creative thinking. The findings of research work have proved that an integrated study model in primary school allows to implement the mentioned conditions. Based on all that, the aim of the article is to analyse students' skills, theoretical knowledge about an integrated discovery study model, implement it in educational work with pupils, create theoretically grounded integrated study content and select pedagogical means for its implementation. The research base comprises 96 4th year students who are acquiring the qualification of a primary school teacher. The research was performed over the period from October 2011 to December 2013. The methodology of discovery learning is based on constructivism theory, emphasizing that a child builds knowledge individually and forms understanding about processes in nature. The readiness of future teachers to implement an integrated discovery study model for early school age pupils is basically sufficient in order to work independently. At the same time a problem is posed for students that at schools there is only a partial support and desire to change something in the organisation and planning of the traditional study process. In the further research work it would be useful to identify students' specific skills to be developed in this model.

Key words: higher education, discovery learning, integrated teaching/learning process, cooperation.

Introduction

The implementation of humane paradigm in the study process in primary school imposes conditions on the teacher: the study process is focused on a pupil, it provides pupils' active participation and emotional experience developing the skills of cooperation, critical and creative thinking.

The mentioned conditions require from a future teacher a particular professional training, a well-considered planning and analysis of pedagogical process and choice of pedagogical means. According to the analysis of theoretical statements and observations in practice, an integrated discovery study model, based on theoretical approaches in action theory and discovery study, provides the opportunity to plan a flexible study process, take into account students' interests, meet their needs.

The integration of contents of various study subjects in order to develop life skills performed by pupils themselves in teaching/learning process discovering, discussing, offering ideas, provides that:

- in educational process a real link between studies and everyday life is formed;
- the educational process is meaningful and interesting, therefore, pupils' academic achievements grow;
- the development of creative thinking is an integral part of teaching/learning process.

The Aim of the article

To analyse students' skills, theoretical knowledge about an integrated discovery study model, implement it in educational work with pupils, create theoretically grounded integrated study content and select pedagogical means for its implementation.

Methodology

The scientific article analyses pedagogical and psychological theories which provide the basis for the integrated study model. In order to explore empiric experience pedagogical observations, partly structured interviews with 4th year students have been carried out.

The research base comprises 96 4th year students who are acquiring the qualification of a primary school teacher. The research was performed over the period from October 2011 to December 2013.

The methodological base of the research comprises conceptual expressions of action theory, the essence of a self-regulated study process (Леонтьев, 2005; Леонтьев, 2007; Bruner, 1999; Давыдов, 1996; Zimmerman, 2002).

According to observations in practice and literature analysis, a pupil's development, in compliance with the inner logics of his/her development, is promoted by a meaningful action chosen, perceived and understood by himself/herself.

The entire knowledge and skills obtained during activities are embedded in pupils' habits and are used in various situations of the action (Špona, 2001).

A unit of the action is the pupil's behaviour which involves the motive of his/her action.The behavioural motive is external, however, the action motive is inner for each subject. The awereness of the motive in the integrated study model is the inner driving force of the action, a subjective component, individual and different for everybody.

The result of integrated study and pupils' benefits in many ways depend on the quality of the implemented integrated study process. In its turn, the quality is affected by the teacher's understanding of the essence of integrated discovery study. Otherwise, instead of the expected progress the teacher can experience a serious disappointment.

The integrated approach to study process has been analysed by scientists from various countries in the context of different periods of time. In the 1980ties and 90ties a concept in integration of programmes – multidisciplinary, interdisciplinary and transdisciplinary approaches – was started to be used.

A lot of scientific research on diversity of integrated approach has been carried out (Drake, 2007; Jacobs, 1989; Fogarty, 2009). All of them have researched and interpreted diverse integrated models (interwoven, related, thematic, interdisciplinary, multidisciplinary, correlated, holistic).

Already in the thirties, in Latvia, E.Pētersons (Pētersons, 1931) spoke about the necessity to organise the study process so that a pupil could see surrounding relationships in nature and from the public point of view.

If varied integrated study models are known in both Latvia and the world, a question rises, why so few teachers use them in practice.To some extent, we can find the answer in a teachers' survey carried out in 2013. It illustrated both benefits and problems.
From teachers' point of view, the necessity of integrated studies was characterized by the following answers:

..Pupils cannot apply the obtained knowledge, skills in a different subject.
..A large proportion of pupils still do not see a mutual link between subjects.
..In order to easier apply knowledge in practice..
..To unburden pupils to some extent..

The teachers pointed out the advantages of integrated studies:

..Develops communication skills and learning skills.
..Can see things as a whole.
..Develops more children's creative abilities.
..The acquired knowledge is easier to be applied in real life situations.
..The skill to analyse and build relationships is provided.

Most of the teachers consider that it is necessary to obtain both theoretical knowledge and practical assistance in order to change the usual organization and planning of the study process.

According to teachers, additional knowledge, pedagogical assistance and support are necessary to implement the mentioned approach.

Pedagogically enriched varied action provides both teachers and students with the opportunities to more efficiently develop their human potentials, the ability to decide on their action competently and responsibly (Jurgena, 2002).

Regarding the research topic, it is necessary to reveal the most essential theoretical concepts for organizing integrated discovery studies to early school age children. As it was already mentioned, the methodological base for implementation of integrated study model was determined by conceptual statements of action theory.

In accordance with observations in practice and analysis of literature, a pupil's development is guided by his own chosen, comprehended and understood meaningful action in comformity with inner logics of his development. The entire knowledge and skills obtained during activities are embedded in pupils' habits and are used in various situations of the action (Špona, 2001). A unit of the action is the pupil's behaviour which involves the motive of his/her action.The behavioural motive is external, however, the action motive is inner for each subject. The awereness of the motive in the integrated study model is the inner driving force of the action, a subjective component, individual and different for everybody.

Moreover, the motives and stimuli of the action are closely connected since stimuli in action can become a motive. This procedural connection is determined by action theory (Леонтьев, 2007).

The rational estimate of action result in terms of satisfaction makes sense for both the motive and action result (for reaching the aim). The possibility for a pupil to engage in planning thematical units, a thoughtful analytical activity facilitate the awareness of sense.

The resulting motive reveals a certain need for a pupil to set the aim of his action, thus, transfering it into an interesting and exciting activity (Леонтьев, 2005; Maslo, 2006).

The aim set by a pupil is an intellectual action component of the motive which is closely connected with the pupil's personal beliefs. However, a motive comprises also feelings and aspirations (Birkerts, 1923).

The methodology of discovery learning is based on constructivism theory, emphasizing that a child builds knowledge individually and forms understanding about processes in nature (Bruner, 1999), but W. Klafki (Klafki,1995) gives a critically constructive explanation. The concept ''critical'' points out the pupil's self-determination process in a study model. In its turn, interaction with each other in discovery learning process, self-evaluation and self-discipline are a precondition of communicative didactics and humane paradigm.

A pupil's abilities to enjoy the first discoveries acknowledge the need as an action motive. A pupil as a discoverer in an integrated study model is characterized by the ability to apply various models and schemes, the ability to alter norms and benchmarks, the ability to interact and cooperate. A pupil is active in the situation of a new task, he can ask himself, the teacher and his classmates the questions which have to be solved.

The obtained skill to discover facilitates the acquisition of the integrated study content providing an active participation in exploring various relationships.

The creation of an integrated study *content* envisages the reflection of the unity of educational and study content both in planning and implementation.

An integrated study content can be defined as a whole of certain knowledge, skills, attitudes, creative experience necessary for a pupil to reach the set aim in developed thematic units, to find answers to the issues raised.

The creation of thematic units envisages an active teacher's professional work when selecting the knowledge to be gained in various subjects, creating the unchangeable part of integrated study content which is aligned with the standard requirements of study subjects (Petere, 2003). The final content is created by pupils' interests and needs identified as a result of teachers and pupils' cooperation. These interests and needs are summarized in thematic units and in order to meet these interests and needs, the knowledge, skills, attitudes to be obtained in various subjects are defined.

For example, theme of the lesson is (3rd grade pupils) Hosting guests from Estonia.

> *In order to draft a plan of events and plan activities, the necessary expenses, pupils acquire both content of social sciences - the skill to take an economically grounded decision- and content of mathematics –the skill to calculate all the expenses for food and cultural activities, if we know that 5 pupils from Estonia are coming and are going to spend 4 days in Latvia. The pupils have to apply multiplying with a 2 digit number and mathematical notions –'' more and less''*
>
> *In its turn, when putting forward a problem – what pupils could make to leave the memories from Latvia to the guests – in a common discussion which comprises the content of social sciences, they come to conclusion that it could be a greeting card comprising both Latvian and Estonian ethnographic patterns. As the learning process for pupils is organized according to the above mentioned statements of action theory, then the pupils themselves search, analyze both Latvian and Estonian ethnographic patterns and justify which of them could be appropriate for formatting the postcard. During the analysis pupils implicitly learn about the elements of both their own national art and that of the other country. In its turn, the design of the postcard, analysis and justification comprise the content of visual art. The greeting card will not have any value if there is no text in the middle. Which folk songs to choose , how to format them, where to find the folk songs – it is up to the pupils.A searching process takes place, pupils learn to find and justify, on the other hand, they implement the content of the Latvian language All mentioned pupils' activities include active work of the pupils themselves: the necessity to judge, analyse, evaluate, draw conclusions which, on the whole, make the elements of both their own culture and also the cultures of those countries from which the guests are coming from.*

According to the observations made, if the integrated model is based on a teacher's high professional competence in planning an integrated study content, then pupils' academic achievements, motivation, a positive attitude enhance.

The planning of integrated study content contains certain didactic conditions. One of the most important principles is the principle of wholiness and interrelation. It can be explained as a connection of the chosen educational modules - man and nature, man and society, man and culture – with the proposed thematic unit. Each integrated thematic unit is formed by the contents of subjects to be acquired by a pupil which also comprises pupils' interests.

Apart from the mentioned condition, we have to take into account the structuring of the study content from general to specific (Давыдов, 1996).

Concentrate principle determines the arrangement of study content providing a pupil with the opportunity to gradually obtain specific knowledge and skills developing and updating them continuously, the principle of succession, in its turn, ensures reliance on a pupil's previous experience, knowledge, understanding (Anspoka, 2008). In case of disregarding the principle, the integrated study content can develop chaotically, disassembling a certain logic which causes difficulties for a pupil's active participation and understanding of the obtainable curriculum.

The national, local, regional component determines that for the acquisition of study content it is vital to incorporate exploring the specific environment, existing objects and events in a pupil's living place.

Undoubtedly, for prospective basic education teachers to acquire and implement the mentioned approach is both a challenge and an important examination of the obtained professional competence.

In order to assess the knowledge and skills of future teachers to conduct an integrated discovery study model, the criteria and indicators were defined.They were applied in both observations during the qualification exam and question formulation in semi- structured interviews.

The criteria and indicators are shown in Figure1.

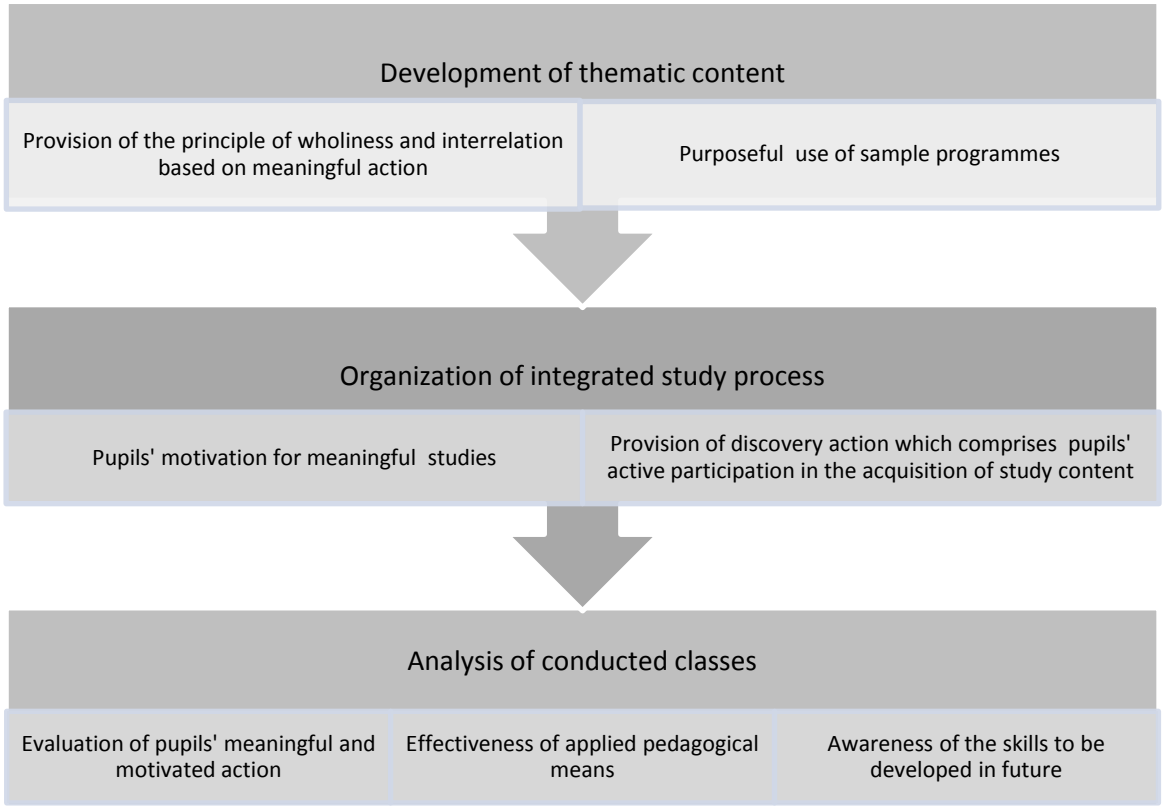

Figure 1. Criteria and indicators for an integrated study model.

Results and discussion

As it was mentioned, during the research we observed 96 students' professional readiness to work out an integrated study model for early school age children and implement it collaborating with pupils during the internship. During the qualification exam in various Latvian schools, students conducted an 80 minute long integrated class by combining the content of 3 school subjects in one whole.

Taking into consideration the research results, we can conclude that out of 96 4th year students, 32 students' knowledge and skills could be assessed as high level. They understood the essence of implementing an integrated discovery study model well, were able to apply theoretical knowledge obtained during the classes, understood what is crucial for implementation of the meaningful study process, could orientate in didactic conditions of study content design. They understood the essence of the principle of wholiness and interrelation and its implementation for both design of thematic units using the content of 3 subjects and planning the integrated study process.

It was testified by both the observations during integrated classes with pupils and the answers to the questions of a semi- structured interview.

For instance, when exploring the issue on abandoned pets, they successfully incorporated the acquisition of skills for both reading numerical charts and the design of charts. In its turn, a conscious reading of analytical text shows pupils the emotional experience of the abandoned pets, while obtaining the skills of sewing, they produce mats for pets and later pupils take them to the nearest animal shelter. Also, in this case sample programmes were applied in order to specify the knowledge, skills, attitudes, creative experience to be obtained.

The findings of the interviews proved that also these students had difficulties in substantiating verbally several aspects of the conducted classes. For instance, when asking questions about the characteristics of pupils' discovery action during the class, the answers sometimes did not give the expected result. On the other hand, while observing the conducted class, we could conclude that during the class the teacher used the tasks corresponding to the characteristics of discovery action.

However, the skill to carry out a substantiated reflection on their pedagogical activity caused difficulties also for these students. For instance, it was hard to analyse pupils' action, purposefully linking it with further lesson planning, also, to specify what should be changed in their pedagogical work in order to improve the conducted lessons in future.

According to the results of the analysis of the conducted classes, 43 students needed pedagogical assistance, encouragement to organize integrated discovery studies. It was hard to follow the principle of meaningful wholiness and interrelation in planning classes, understand about a pupil as a subject of the action in study process and the essence of discovery action. We could state that students had difficulties to implement theory into practice. For instance, when designing the integrated study content, it often revealed the research problem superficially, there was a lack of skill to purposefully select the knowledge and skills to be obtained, to ensure emotional attitude.

These students often chose the easiest way, to use the tasks from the course books without analysing their usefulness in connection with the problem to be investigated.

The results of the the conducted classes and interviews testified that there are difficulties in comprehension of meeting certain didactic conditions in both planning the integrated content and organizing it. The application of theoretical statements for the implementation of discovery study model was not observed. It was good that these students understood that integrated discovery study model facilitates the dynamics of pupils' development, motivation to acquire the study content, understanding relationships existing in nature and society. As the students admit, it is necessary to invest a great job in order to obtain particular skills high-quality at early school age, to implement integrated studies meaningfully.

The research established that the implementation of the above mentioned pedagogical model demands special competencies of the future teacher.

The described education model can be implemented only by the teachers who truly believe in the necessity of the emphases being changed in education, based on intelligence, holistic approach to pupils' development, who are truly devoted to it.

A summary of semi-structured interviews allows us to judge the students would be psychologically ready to implement the described model, yet, the fear of making mistakes, discipline problems, uncertainty hinder them, as well as awareness that the implementation of such a model demands a lot of time, because it is not possible to take up a book and conduct the lesson based on the frontal class work. The fear is inherited from the normative education paradigm, guiding us from our sub-consciousness. We have to admit that it demands a very great pre-lesson work, also, the teacher must be bestowed with very good communicative skills and deeply love children. Additional problems are caused by the lack of teaching/learning aids, which could facilitate the development of the education contents based on the pupils' needs, simultaneously ensuring the acquiring of the knowledge, skills demanded by the subject standards.

It is necessary to:

- integrate content and skills with process,
- provide opportunities for interaction nad co-operation with others,
- engage and interest the learner in what be/she is learning,
- integrate values, actions, skills, knowledge toward a common purpose,
- build a partnership between the teacher and pupils.

The content of an integrated discovery study model can be packaged in the form of particular topics around which units of work are developed.

The findings of the research enabled Riga Teacher Training and Educational Management Academy (RTTEMA) academic staff to evaluate the efficiency of their conducted classes and look for new techniques to link theoretical knowledge about the implementation of an integrated discovery study model with practical pedagogical work.

Conclusions

The readiness of future teachers to implement an integrated discovery study model for early school age pupils is basically sufficient in order to work independently. However, when organizing the study process at RTTEMA, it is vital to strengthen the opportunity for students to link theoretical statements with practical activities as well as develop students' analytical skills.

While observing and analysing the integrated discovery model conducted by students, we could conclude that students actively discuss and give their opinions, substantiate which teaching/learning tasks would be effective in order to reach the planned aim and implement the common tasks.

At the same time a problem is posed for students that at schools there is only a partial support and desire to change something in the organisation and planning of the traditional study process.

In addition, when organising the study process at RTTEMA, it is necessary to reinforce the opportunity for students to link theoretical statements with practical activities as well as develop students' analytical skills to understand the results of both a pupil's and his/her own educational activities.

In the further research work it would be useful to identify students' specific skills to be developed while implementing an integrated discovery study model in educational process at school.

Bibliography

1. Anspoka Z. (2008). *Didactics of the Latvian Language Forms 1, 4.* Monograph. Rīga: RaKa, 474 p. (In Latvian)
2. Birkerts P. (1923). *Pedagoģiskā psiholoģija*. *(Pedagogical psychology),* Jelgava, 344 p. (In Latvian)
3. Bruner J. (1999). *The process of education.* Cambridge: Harvard University Press, 97 p.
4. Drake S. (2007). *Creating standards-based integrated curriculum: Aligning curriculum, competent assessment, and instruction*. Ca, Corwin, Thousand Oaks. 232 p.
5. Fogarty R. (2009). *How to integrate the curricula.* California, Corwin, 139 p.
6. Jacobs H. H. (1989). *Interdisciplinary curriculum: Design and implementation.* Alexandria: Association for Supervision and Curriculum Development, 98 p.
7. Jurgena I. (2002). *Vispārīgā pedagoģija*. (General pedagogy). Rīga, Izglītības soļi (Educational steps), 144 p. (In Latvian)
8. Klafki W. (1995). Didactic analysis as the core of preparation of instruction. *Journal of Curriculum Studies* 27(1), pp.13–30.
9. Maslo I. (2006). *From knowledge to competent action* Rīga, LU Academic Publishing house, 186 p. (In Latvian)
10. Petere A. (2003). *Integrated studies in the light of the humane paradigm.* Vilnius, Pedagogica, 65 p.
11. Pētersons E. (red.). (1931). *General didactics* Rīga, A. Gulbis, pp. 45 – 96.
12. Špona A. (2001). *Audzināšanas teorija un prakse*. (Theory and practice of upbringing). Rīga, RaKa, p. 162. (In Latvian)
13. Zimmerman B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, 41*(2), pp. 64–70.
14. Давыдов В.В. (1996). *Понятие деятельности как основание исследований научной школы Л.С. Выготского* (Understanding of action as the base for research in science school of Vigotsky). *Вопросы психологии, № 4., 37-43с.* (In Russian)
15. Леонтьев А. Н. (1975/2005). *Деятельность. Сознание. Личность* (Action. Awareness. Personality). Москва, Смысл, 346 с. (In Russian)
16. Леонтьев Д. А. (2007). *Психология смысла* (Psychology of comprehension). Москва, Смысл, 368 с. (In Russian)

Reality of School Students' Moral Value Education in Lessons of Technologies

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Abstract: While organising the process of education, it is necessary to achieve higher level of school students' perception and implementation of moral values. Contemporary technology education integrates not only creation, technology learning and practical implementation of ideas but also individual‘s value education. It is important to integrate values into processes, activity principles applying teaching techniques at all levels in a complex way. The goal of the research is to conduct a survey of teachers and 5th-12th formers about peculiarities of moral values education during lessons of technologies. The research methods: analysis of scientific literature and documents, empiric research, statistical analysis of research data. The research was conducted in 2012-2013 and the sample of the research included 104 teachers and 221 school learners. The research results revealed a unified opinion about importance of integration of moral values education into lessons of technologies. The specific features of the subject are emphasised: lessons are delivered in small groups, flexible composition of subject content based on compliance between traditions and innovations. It was revealed that values of respect, honesty and responsibility are most frequently developed, whereas altruism and sensitivity are among least often developed ones. Teachers of technologies are certain that all the programmes of technologies are appropriate for development of learners’ moral values.

Keywords: school education, moral values education, lessons of technologies.

Introduction

Moral values education is an integrated part of the pedagogical process. Values education is provided for in all the documents of education system but is not implemented to full-extent because values can hardly be determined by standards. Scientific studies confirm that values education is a necessity in contemporary world, whereas adolescence is one of the most significant periods for adoption of values because during this period a child undergoes a fast personality development in all its planes.

Contemporary technology education is perceived as a process, which integrates not only creation and creative ideas but also their practical implementation. This study subject embraces not only learning of various technologies and their application but also development of life skills. Social communication skills are also improved through development of responsibility, self-control, self-confidence and resistance to impact of risk factors. Beauty, various artistic activities contribute to education and development of school learners' emotions, feelings, artistic inclinations, morality and sensitivity. There derives a practical purpose to educate personalities, which are able to collaborate and communicate as well as to adapt to particularly fast changes in contemporary competitive society (Širiakovienė, 2005).

The provisions of the National State Strategy for Education 2013-2022 state that “taking into account contemporary challenges imposed on society, education assumes a mission: educational policy and envisaged change trends have to rally educational community and all the Lithuanian people to engage in lifelong education pursuing personal and country’s success, ensuring equal opportunities to enable an individual to understand contemporary world, to obtain cultural and social competence and to be a self-dependent, active and responsible individual, who is eager to learn lifelong and to create own life and that of community“. Morality, love and respect for an individual is the core of humanity and the basis of humanistic pedagogy; therefore, pursuing achievement of common goals, a particularly considerable attention should be allocated to harmony of relations among individuals. According to J. F. Goodman and H. Lesnick (2004), a teacher has to be oriented towards revelation of richness of moral education. V. Aramavičiūtė (2005) states that the content of purport of life should embrace spiritual values with priority placed on moral values.

Both teachers and parents should not forget that foundations of moral (self-)awareness development are laid in adolescence and moral concept and beliefs as well as norms of moral behaviour are formed in learner’s consciousness during this period.

Each study subject accumulates a huge potential of values education, which should be implemented employing a variety of teaching/learning methods and forms. Technology education is exceptional and unique as there are 5 programmes for this study subject in basic school (nutrition, textile, constructional materials, electronics and product design), therefore, the study subject of technologies itself has broad interdisciplinary links with other study subjects. Due to the aforesaid reasons while teaching/learning of technologies a variety of factors, which promote moral values education, are possible because ample and diverse information is available. The purpose of moral education is to help a learner to reveal common human values and to substantiate their personal and social life on them. It is important to develop individual's abilities to independently consider question of human existence, to make responsible decisions in complicated contemporary world. In parallel, respect for traditional values, which constitute fundamental of national and western culture should be developed. The importance of development of moral values is emphasised by a big number of Lithuanian education researchers: V. Aramavičiūtė (2005) discloses the significance of spiritual maturity of personality and formation of moral positions; E. Martišauskienė (2003) stressed development of adolescents' spirituality, N. Cibulskaitė (2000) laid emphasis on humanisation; S. Lileikis (2007) revealed development of young people's altruism; R. Bakutytė (2001) focused on development of humanism; B. Žygaitienė (2002, 2014) emphasised importance of moral values; A. Girdzijauskas (2012) discussed development of moral culture through music.

The goal of the article: is to identify opinion of Vilnius teachers and 5th-12th formers about possibilities of developing moral values during lessons of technologies.

Methodology

To achieve the research goal theoretical (scientific literature and education document analysis) and empiric methods were applied. Comparative analysis was also employed dividing the research objects into separate components, variables and features making attempts to identify opinions of school learners, technology teachers and other teachers about peculiarities of moral values education in contemporary school. The following psychological, pedagogical, social and philosophical literature was used: "General Curricular" (Pradinio ir pagrindinio…, 2008), "The Description of Teacher's Professional Competence" (Mokytojo profesijos…, 2007), the studies by Lithuanian education researchers V. Aramavičiūtė (2005), E. Martišauskienė (2003), N. Cibulskaitė (2000), S. Lileikis (2007), S. Dzenuškaitė (1990), R. Bakutytė (2001), B. Žygaitienė (2002), J. Mulevičienė (2002) and other authors. Considering the research carried out by the aforesaid researchers, the questionnaire forms were drawn up.

On the basis of the research by C. M. Charles (1999), one of the methods of anonymous research – written questionnaire - was used.

The sample of the respondents was calculated with the respondent calculator (online access at: http://www.surveysystem.com/sscalc.htm), which allowed to establish the number of respondents necessary to acquire representative data.

The research was conducted in 2012–2013. Applying of triangulation, the questionnaire survey of three groups of respondents (5th-12th formers, technology teachers and teachers of other study subjects) was carried out. The school learners of 5th-12th forms from six Vilnius city schools of general education were surveyed using paper questionnaire forms (221 school learners participated in the survey).

The sample of teachers included 104 teachers of Lithuanian general education schools (48 out of them - technology teachers). The statistical, graphic and correlation analysis of research data was conducted. The data of questionnaire survey were processed using version 17.0 of SPSS (Statistical Package for Social Science).

Results and discussion

Technologies is one of the most favourable and suitable study subjects for integration of moral values education. The link of study subjects of technologies with integration of values was confirmed by the

responses of teachers and school learners to the question “Is it important to develop moral values during lessons of technologies?“. All the teachers of technologies almost unanimously agree that it is important and highly important (45.8 / 54.2 %), teachers of other subjects also refer to the study subject of technologies as to highly important or important (32.1/58.9 %) for moral values education. About 60.2 % of the school learners in the survey are sure that lessons of technologies are important to (self-)development of moral values, other learners do not have their opinion about this issue due to their young age.

Economic, technological and socio-political changes have inevitably changed human values and behaviour in a big number of spheres; however, the most considerable changes have been observed in their attitudes towards motivation to work, religion, political conflicts and children’s upbringing. Values have to be integrated into processes and activity principles to the extent, when they become tangible and overall perception. Such process is not only time consuming, requires contribution of efforts and concentration but also a well-prepared, strategically reasonable communication plan. Modernization process predetermines a transition from traditional values to secular or rational ones. Upbringing their children and implanting underlying values in them, Lithuanians usually forget to emphasise the importance of respect, tolerance and confidence. According to the opinion of technology teachers, the most frequently stressed values are shown in Figure 1. Analysing the data, it can be stated that the first three places are taken by the following values: respect (66.7 %), honesty (56.3 %) and responsibility (54.2 %). Tolerance and self-control (12.5 %) are stressed by teachers of technologies less frequently.

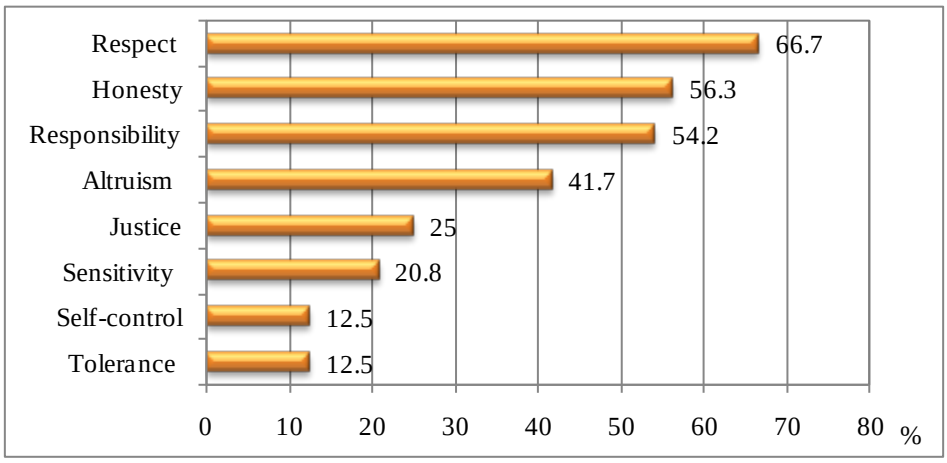

Figure. 1. Most frequently emphasised values during lessons of technologies (according to teachers of technologies).

The young respondents distinguished the values of responsibility (57 %), honesty (48.9 %) and respect (42.1 %) as particularly emphasised and ascribed such moral values as sensitivity (43 %) and altruism (35.7 %) to rarely stressed ones.

All the teachers of technologies unanimously pointed out that they integrate development of respect and honesty (100 %) to the content of a lesson most frequently. Development of responsibility (85.5 %) was ranked third, whereas such moral values as sensitivity, tolerance and altruism are developed sometimes or rarely by teachers of technologies.

Having carried out the research on emotional internalisation in adolescence, E. Martišauskienė (2004) highlighted an educational support as an obligatory factor of spiritual becoming. This is predetermined by the fact that the level of spiritual experiences of adolescents (agnostic ones in particular) is low, positive correlations of feelings are weak but they are meaningful and reflect priorities of pedagogical interaction. The acquired research results confirm that the values, which are emphasised during lessons by technology teachers, are most frequently developed. It can be concluded that criteria for designing of the curriculum allow to freely model the content of education, where all the competences necessary for a school learner are developed. The comparison was carried out in the research asking teachers of other study subjects the same question (see: Fig. 2). The acquired research results confirm

that the values, which teachers of technologies have to emphasise during the lessons, are most frequently developed as well: e.g., responsibility (57.0 %), honesty (48.9 %) and respect (42.1 %).

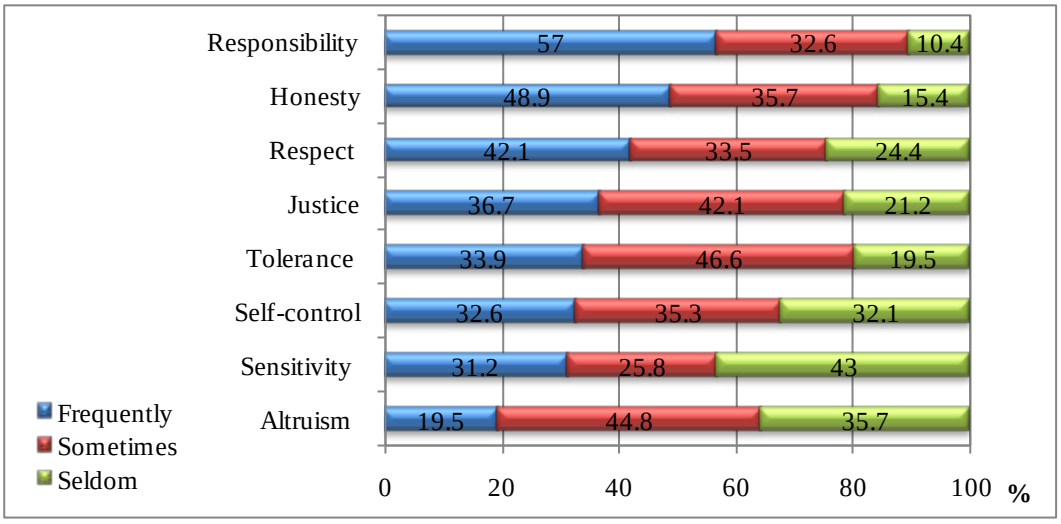

Figure 2. Distribution of moral values education during lessons of technologies.

Comparison of the data on frequency of moral values integration acquired from teachers of technologies with these of other teachers revealed numerous similarities. All the teachers point out the following values as the most frequently developed: respect (87.5 %), responsibility (94.6 %), honesty (71.4 %) and justice (67.9 %). Such values as altruism (60.7 %) and sensitivity (53.6 %) are developed sometimes and a number of respondents ascribe altruism (21.4 %), sensitivity and self-control to rarely fostered values.

The acquired results showed that the respondents, who pointed out that responsibility is developed most frequently, less frequently stated that altruism is also nurtured most often. A strong statistically significant correlation was established (ρ_s = - 0.607; $p < 0.0001$). The respondents, who indicated that tolerance is most frequently developed, pointed out that self-control is developed most frequently as well. A strong statistically significant correlation was established (ρ_s = 0.772; $p < 0.0001$). The same opinion was identified about the correlation between the frequency of development of tolerance and sensitivity and a strong statistically significant correlation was identified (ρ_s = 0.460; $p < 0.0001$).

Coherence of traditions and innovations is of importance to moral values education. Nurturance of such moral values is not static, undergoes a certain evolution and is linked to contemporary culture. It is necessary to feel balance between traditions and innovations, to nurture their harmony pursuing development of principles of children to assume continuity of moral values. Simultaneously, they should be encouraged to notice modern values based on traditions, to employ opportunities to cognise the diversity of values provided by modern technologies. Process of moral education may be integrated into various areas of learners' education choosing (self-)education styles.

The respondents were asked: “Which teaching technique is the most appropriate (self-)developing moral values?“. The respondents prioritise discussions about issues of moral values: 71.1 % of school learners, 75 % of technology teachers and 68.4 % of other teachers agreed with this statement. According to school learners (28.2 %), school projects have least effect on formation of moral values; however, teachers of technologies (70.4 %) provided a contradictory opinion stating that joint activities are appropriate for values (self-)education and only 20 % of teachers of other study subjects expressed the same opinion. About 89.6 % of technology teachers and 76.8 % of teachers of other study subjects indicated that integration of themes on moral values into the content of lesson have the most significant influence on moral values (self-)development. A more detailed comparison of the opinions of school students, teachers and teachers of technologies about the influence of teaching techniques showed that technology teachers (89.6 %) and other teachers (76.8 %) more frequently than learners (44.5 %) consider integration of moral values into content of lessons an efficient

technique for development of moral values. The aforesaid tendency is confirmed by statistically valid data ($\chi^2 = 19.605$; df = 2; p = 0. 003; p < 0.05).

Figure 3 shows which teaching programme of the study subject of technologies is most favourable for integration of moral values education.

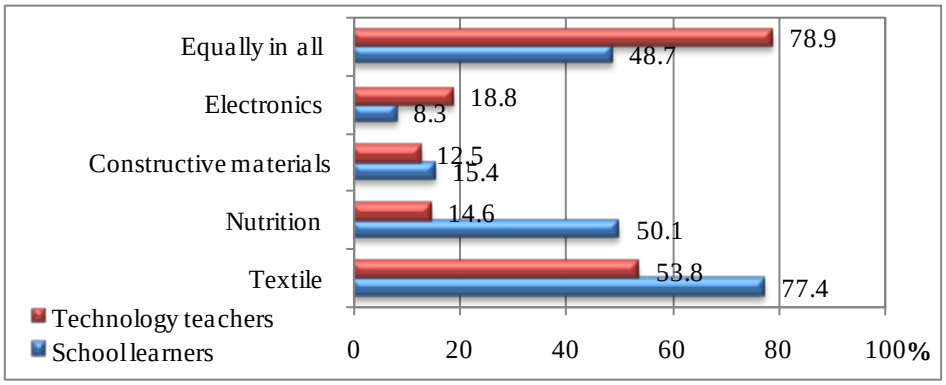

Figure 3. Distribution of the opinion of the respondents about appropriateness of the study subject of technologies moral values education.

The research data revealed that according the opinion of technology teachers all the programmes of technologies are equally suitable for development of moral values: the statement supported by 78.9 % of technology teachers. A more considerable gap is seen in the programme of textile (53.8 %). According to school learners, technology lessons target at balance between preservation of heritage and innovations: textile (77.4 %) and nutrition (50.1%) programmes are more favourable for integration of moral values. School learners more frequently than teachers of technologies pointed out that nutrition programme is appropriate for moral values education and this tendency was observed by statistically valid data ($\chi^2 = 14.288$; df = 2; p = 0.001; p < 0.05).

To clarify how school learners evaluate prevention activities organised during technology lessons, school learners were asked to point out if during lessons of technologies they face neglect of moral values and how emerging problems are solved (Fig. 4).

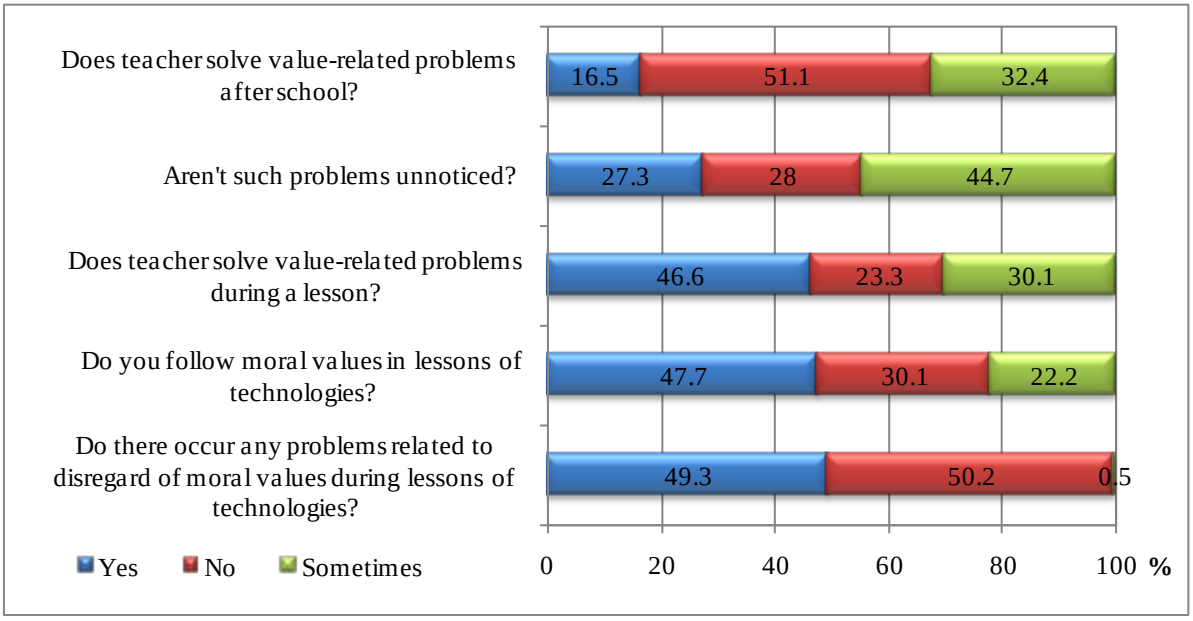

Figure 4. Distribution of prevention activities related to neglect of moral values during lessons of technologies.

About 49.3 % of school learners acknowledge that there occur no problems regarding neglect of moral values, 30.1 % of school learners chose a negative response to the question if they follow moral values in technology lessons themselves and 22.2 % of the provided the answer "sometimes". The obtained research results show that the biggest load of prevention activities solving problems of moral values encountered by school learners falls on teachers of technologies during their lessons: this variant was chosen by 46.6 % of the respondents. A negative response to the question if moral problems were solved after lessons was provided by 51.1 % of school learners. The biggest number of young people (44.7 %) chose the variant "sometimes" answering the question: "Aren't the moral problems unnoticed?".

Conclusions

- The research results revealed that respect (66.1 %), honesty (65.2 %) and responsibility (52.0 %) are placed at the top of the hierarchy of adolescents' moral values. The absolute majority of teachers of technologies (91.7 %) agree that respect is considered to be the most relevant value for adolescents. Such values as honesty (89.6 %) and justice (60.4 %) are ranked as highly relevant to adolescents by teachers of technologies. Altruism and sensitivity are seen as irrelevant or less important among adolescents, adolescents do not understand such moral values and they are seldom nurtured.
- The research data disclosed a unified agreement of all the respondents about importance of integration of moral values into lessons of technologies (80 %). Such opinion could have been conditioned by exceptionality of the study subject of technologies: lessons are held with a half of the class, i.e., in small groups, where openness and trust prevail. On the other hand, the criteria of devising of educational programmes allow to freely model the content of education.
- The obtained data confirm that the values, which have to be emphasised during lessons by teachers of technologies, are nurtured most frequently: respect (66.7 %), honesty (56.3 %) and responsibility (54.2 %). Development of such moral values is not static, undergoes a certain evolution and is linked to contemporary culture. According to the opinion of teachers of technologies (78.9 %), all the programmes of technologies are equally favourable for development of moral values. School learners more frequently than teachers of technologies pointed out that nutrition programme is most appropriate for development of moral values ($\chi^2 = 14.288$; df = 2; p = 0.001; p < 0.05).
- The research on efficiency of techniques of moral values education revealed that it is not enough to rely on one technique of values education, values have to be integrated into processes and activity principles until they become tangible or a common perception, i.e., the efficiency of teaching techniques is reflected while applying them in a complex way acting at all (individual, group and organisation) levels. Teachers of technologies (89.6 %) and teachers of other study subjects (76.8 %) more frequently than school learners (44.5 %) think that integration of moral values into content of lessons is efficient ($\chi^2 = 22.354$; df = 2; p = 0.001; p < 0.05).

Bibliography

1. Aramavičiūtė V. (2005). *Auklėjimas ir dvasinė asmenybės branda* (Education and Spiritual Maturity of Personality). Vilnius, Gimtasis žodis, 278 p. (In Lithuanian)
2. Bakutytė R. (2001). *Pradinių klasių mokinių humaniškumo ugdymas* (Primary School Students' Education of Humanity). Šiauliai,ŠU, 79 p. (In Lithuanian)
3. Charles C.M. (1999). *Pedagoginio tyrimo įvadas* (Introduction Educational Research). Vilnius, Alma litera, 397 p. (In Lithuanian)
4. Cibulskaitė N. (2000). *Matematikos mokymo humanizavimas V-je pagrindinės mokyklos klasėje* (Humanization of Teaching Mathematics in the 5th Grade of Basic School). Daktaro disertacijos santrauka: socialiniai mokslai, edukologija (07 S) (Summary of Doctoral Thesis: Social Sciences, Educology). Vilnius, 27 p. (InLithuanian)

5. Dzenuškaitė S. (1990). *Dorovinės pozicijos pradmenų formavimas pradinėse klasėse* (The Formation of Moral Positions' Elements in Primary Grades). Vilnius, Viltis, 130 p. (In Lithuanian)
6. Girdzijauskas A. (2012). *Aukštesniųjų klasių mokinių dorovinės kultūros ugdymas muzikine veikla* (Character of Musical Activity of Senior Pupils and Its Links with Their Moral Culture). Klaipėda, Klaipėdos universiteto leidykla, 216 p. (InLithuanian)
7. Goodman J. F., Lesnick H. (2004). *Moral Education: A Teacher Centered Approach. Boston, AllynandBacon*, 224 p.
8. Lileikis S. (2007). *Jaunuolių altruizmo ugdymas* (Altruism Education of Young People). Klaipėda, KU, 198 p. (In Lithuanian)
9. Martišauskienė E. (2003). *Paauglių dvasingumas kaip pedagoginis reiškinys*(The Spirituality of Adolescents as a Pedagogical Phenomenon). Habilitacinio darbo santrauka: socialiniai mokslai, edukologija. Vilnius: VPU leidykla, 98 p. (InLithuanian)
10. Martišauskienė E. (2004). *Paauglių dvasingumas kaip pedagoginis reiškinys*. (The Spirituality of Adolescents as a Pedagogical Phenomenon). Vilnius, VPU, 225 p. (In Lithuanian)
11. *Mokytojo profesijos kompetencijos aprašas* (2007). (Discription of the Competence of Teacher's Profession), Lietuvos Respublikos švietimo ir mokslo ministro 2007-01-15 įsakymu Nr. ISAK-54 (Lithuanian Ministry of Education and Science) [online] [02.10.2014]. Available at https://www.e-tar.lt/portal/lt/legalAct/TAR.CEA71C4AC289 (In Lithuanian
12. Mulevičienė J. (2002). *Paauglių estetinių nuostatų ypatumai* (The Peculiarities of Aesthetical Attitude of Teenager). Pedagogika. T. 64, p. 97–101 (In Lithuanian)
13. *Pradinio ir pagrindinio ugdymo bendrosios programos* (2008). *(General Primary and Basic Education Program)* Lietuvos Respublikos švietimo ir mokslo ministerija (Lithuanian Ministry of Education and Science) ISAK-2433. [online] [02.10.2014]. Available at https://www.smm.lt/uploads/documents/veikla/Veiklos_sritys/Svietimas/pradinis_ugdymas/2008-08-26-ISAK-2433(2).doc(InLithuanian)
14. Širiakovienė A. (2005). Papildomo darbinio (technologinio) ugdymo kaita Lietuvojem (Development Change in the optional Handicraft (Technology) training in Lithuania). Acta Paedagogica Vilnensia, Nr. 15, pp. 143–147 (InLithuanian)
15. Žygaitienė B. (2002). *Kai kurie mokinių elgesio kultūros ugdymo aspektai*. Pedagogika (Some Aspects of Education of Culture of Behavior). T. 63, pp. 120–126. (In Lithuanian)
16. Žygaitienė B. (2014). *Technologinis ugdymas kaip dorovinių vertybių, bendrųjų ir profesinių kompetencijų įgijimo prielaida* (Technology Education as Prerequisite for Acquisition of Moral Values, Generic and Professional Competences). Mokslo darbų apžvalga: socialiniai mokslai, edukologija (07 S) (Review of Scientific Works: Social Sciences, Educology). Vilnius, Lietuvos edukologijos universiteto leidykla, 89 p. (In Lithuanian)

Life quality in the context of home environment, home economics, household, consumer science, visual art

Art in Public Sphere and Sculpture Practices in Public Places in Turkey

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Abstract: While "public sphere" as an abstract concept is fulfilled in the process of social life, "public place" must be perceived more physically. As an art form, sculpture always affects easily its environment naturally. So, there is a strong relationship between, sculpture and public areas such as public sphere and public places. As an artistic discipline "sculpture" has gained significance after the proclamation of Turkish Republic and perpetuated its entity as a phenomenon integrating with Atatürk's monuments. However, it could be said that the beginning stage of sculpture in Turkey had a functional purpose in a sense. For example, monuments and busts, in this period, have been considered as another way of transferring stories and heroisms to society related to the foundation of young Turkish Republic. The process extending to the present, sculpture art has moved out of its reflective feature of certain subjects and tried hard to find ways for reaching at a situation where the artist can bring up its personal approach. It is emphasized in art education. This period, when compared with the processual background of western art atmosphere, has been sufficient from the point of providing necessary accumulation for developing the tradition although it includes a short period of time in Turkey. The way to share these artistic values with more people will be possible with their accessibilities in the meaning of both physically and intellectually. With such an idea, meeting the sculpture with audience directly has brought to the agenda the opening outs that modern approaches could be internalized by more crowds of people easier. This study is going to search for the importance of sculpture in the public places in Turkey that are believed to support the accumulation of its tradition and encounter with the public sphere/place.

Keywords: art education, sculpture, public sphere, public place, outdoor sculpture, esthetic conscious.

Introduction

Sculpture can be defined as an artistic form that owns a voluminous feature, a direct connection with the environment it lives in and at the same time a place special to itself as well. Sculpture as a form of art is of a structure that affects its environment directly.

For that reason, the communication being created between sculpture and public sphere/place shows similarity with the relation between collective consciousness and public place.

With this study the definition of public sphere/space, relationship between sculpture and public sphere/place as part of art education and its improvement in Turkey will be tried to explain briefly.

Public Sphere and Sculpture/Art in Public Sphere/Place

The concept 'public sphere' here has been approached with the defining style of J. Habermas. So, while 'public sphere' is an abstract concept being realized in the social life process, 'public place' should be perceived as a more concrete and physical concept which prepares an environment for its formation. The concept 'public sphere' by J. Habermas has been defining an institution being concrete with the participation of people. However, public sphere cannot be defined as 'crowd' in a simple way (Habermas, 1995).

J. Habermas says that an area similar to public opinion in itself in a sense can be formed with his 'public sphere' concept and a piece of social life has been defined. To him, the most important quality of public sphere is that its openness to all citizens and this is created with every kind of communication where citizens create a public organ with each other (Habermas, 1995).

As for the public places, they are the areas bearing/reflecting the features of a city such as social structure, culture, identity etc. and at the same time where many activities are held, sharing are realized and that of art; consequently, of an art work has been able to become a united whole with

human being, and also the areas where society could be one inside the other with art, even if physically.

It is possible to define these places as environments formed by common habitations as well. Environment is the whole of relations formed by life itself and it constitutes a system becoming a united whole with those in it. Environment has a determined language & narration that becomes a united whole with life. And this creates effects on individuals and society. The components forming the environment and their succession in a certain order, participation into one another have been realized in a physical atmosphere and bear a different meaning for every individual. Perception of the environment shows alterations depending upon personal life of the perceiver, structuring, intellectual background, time resided in environment and prejudices regarding environment (Cubuk, 1978).

The physical environment that bundles an individual up, that is to say, his outer would has been composed of areas that affect his personal development directly, in other words, his 'mandatory meeting places'. The individual in active life is located in these places enforcedly in long or short times. Mostly, these seem to have been comprised of lanes, streets, squares, parks and public spheres like these. Nevertheless, technological revolution renders a compulsory meeting for people in various appearances whether good or bad by means of media tools in their houses that are the most private places as well. This is another issue. Yet, the places in question that people might be obliged to be present whether they want or not, the ways that they have to be in the position of getting through can be called as 'mandatory meeting places', too. The areas characterized as mandatory meeting places, in fact, correspond to the concept of public place. (Ataseven, 2003, 16-21)

The disciplines that support the existence of these areas in a physical meaning need to be presented as architecture and art. While architecture undertakes the task of designing public place as 'place', art itself takes the function on to add semi-logical/ symbolic meaning to this place beside an identity and esthetical value. In general meaning, when places in urban scale are taken into account, the style of this art appears as sculpture again.

These art works situated in public spheres which are characterized as open area sculpture are seen to perpetuate its existence at different styles in unique structure of each period throughout history. The artist, as a result of the deep-rooted changes undergone along with the 20th century, has oriented toward studies that becoming more integrated with outer world, bringing originality to places and contributing to environments that establish a mutual relation with life.

As for sculpture's becoming a public art object, it means that there has been a direct interaction with the viewer and it has begun to form a more direct influence into life. With respect to public art, it confronts us as an event developing along with this process. It is necessary to evaluate public art as one of the components in the formation of public sphere and development with its features providing certain awareness and public interaction and communication.

At the same time, monuments evaluated as public art, environmental installation, open area sculptures represent the art that are removed from covered-hidden exhibiting places to public areas/ places. Art created in public places that are open areas to public has reached a more significant point in the formation and development of culture through direct interaction that it sets up with every human being this way.

Public places where social interactions have been realized and artistic formations integrating with these places can be thought as the most important ones out of the factors forming public culture. Both architectural constructions and art works/sculptures taking place in public places become efficient on viewer, in short on environmental man if prepared effective and in a sensitive way.

This situation plays an important role in bringing both public sphere and public art into existence together reciprocatively. Considering this idea, it can be said that reaching up to maximum number of people and effective ones among art works are the art forms (called as open area sculpture as well) that have made accepted in public sphere itself and public places related to it.

Sculptures situated in public places or, in other words, in city places become shareholders in the formation of city's esthetical value by creating a whole with other landscape components such as

architectural constructions and green areas forming environmental appearance. When viewed from this aspect, bearing in mind that art brings a more humanistic dimension to the environment it exists in, it is clear that it would be very lacking without including art forms of sculpture types in public sphere which should be accepted as an interaction area.

Sculpture Practices in Public Places in Turkey

That public places become an ideal and humanistic social living place is not only related to welfare level of a county but also art objects that bring into being and give the meaning to these places with its cultural and artistic richness as well. As for these objects, they are mostly the sculptures that give unique spirit to public places.

The art phenomenon at public sphere in Turkey has been generally perceived as monument and monumental applications in sculpture discipline. As an art discipline, "Sculpture" in Turkey has become more of an issue after the proclamation of the Republic and has continued its existence as a phenomenon being identified with the sculptures of Atatürk.

In this period, monuments and busts have been considered as another way of transferring the narrations and heroic deeds that belong to the foundation of young Turkish Republic. After all, it can be said that sculpture in Turkey has a functional aim.

As for the process extending to present day, sculpture discipline, by digressing from its feature of reflecting some certain issues, has tried to find ways in which an artist is going to be able to expose his personal approach. This period for Turkey, compared with the formation ground of western art environment, despite the fact that it includes a short time period, it has been sufficient to provide necessary accumulation for the formation of a tradition.

The way to be able to share emerging artistic values with more crowds passes from its attainability as both physically and ideationally. From such a point of view, public places that enable sculpture's direct meeting with audience have been ideal environments for internalization of contemporary approaches by large mass. It has been benefited from monumental sculptures put up to public places for visualizing the significance of independence struggle and adopting republic ideals to public by thinking this function of art in the newly founded periods of Turkish Republic.

"In public acclaim of sculpture art in Turkey, the share for ideological need to monuments in modernization program of Republic regime has been great… The most important figure of all these principles and values to be summarized as winning the war maintained against imperialism, providing liberation and independence and foundation of the Republic is undoubtedly Atatürk and art/sculpture image has gained a new radical meaning in Atatürk's secular personality" (Yaman, 2002, 155).

"Reconstruction of Anatolia physically after the war of Independence and increasing the activities of public works are one of the leading programs. Squares and parks planned by European experts in a city mentality have begun to be envisaged as significant meeting and gathering places of public life and this contemporary city life understanding has also begun to be considered important. Another feature distinguishing Republic cities from Ottoman ones has been monumental sculpture applications realized in these areas determined. Republic architecture and art envisaged and utilized as an ideological tool by the government has taken on a task to demonstrate state/regime and has designed and realized a new public sphere different from the one of Ottoman Empire (Yaman, 2011, 71).

For that reason, public buildings, schools, social areas, Republic squares designed in the mentality of new city created have been thought with the sculptures of Atatürk (Figure 1,2,3,4).

"The new city centers established, as different from the central configuration focused around the commercial settlement of the Ottoman have been transformed into the indicator of Turkish, nation state mentality, modernity and secularism. The sculptures of Atatürk usually focus on the center of this new function of the city or take place in the areas such as square, street, park, museum, etc. where the public is thought to come together" (Yaman, 2011, 71).

However, some crucial advances for the development of villages and peasants culturally in particular have been made along with this period. In this context, the transformation of village has been targeted,

such that with the modernization project of villages the problems of transportation, economy, health, cleanliness, water, agriculture, afforestation, education and librarianship have been designed blow-by-blow from houses to squares… In such a village where Turkish culture can clearly be seen; along with radio, travelling cinema, theater, a stage to be used for propagandas, newspaper, rooms for reading books and coffeehouses, "A Ghazi Sculpture" in the village square to be characterized as 'the honor of the village' and designed as public sphere that is going to introduce the liberator who founded the Republic should have been situated in there as well. This resolution has been stated with the words "A square is the honor and meeting place of the village. A pool is for a peasant who works in the vineyard and field all day in the full glare of the sun refreshing after hearing the splash of the water by looking at it towards evening and feeling relieved of his heart. The flower garden to include the pool and sculpture is for the relief of heart again. As for the Ghazi sculpture, it is going to introduce the children of today and tomorrow the liberator of the country and the founder of the Republic. A person who does not know how to have fun & live and cannot distinguish the benefactor and evildoer has nothing to do for himself too. Turkish peasant does not forget the one who makes charity. Ghazi sculpture is a sign of the liberation of the country and moving forward day by day and a source of speed to give power to hearts in succeeding any new and useful business to be done" (Yaman, 2011, 72).

Conclusion

Yet, unfortunately, this project beginning with village institutes could not have been long-termed and has not been able to reach its goal exactly. Sculpture art in Turkey has been a branch of art that enlivens only in city's public squares. Art of sculpture made its presence felt with monuments built after the Republic era had begun independent of the traditional art inherited from the Ottoman era. However, this began to change when the first generation of Turkish artists tended to turn from figurative description to an abstract-constructive approach. (Figure 5,6)

Therefore, it was seen that sculpture in Turkish culture was going towards alternative movements shaped as mass-space and form art. In the following stage, Turkish sculpture acquired a character of its own with new depictions and expressions in which arrangements were of importance, original interpretations and new materials were experienced and it continues to make progress. Therewithal, at the present time in Turkey's contemporary art, there are many artists who produce art works, which integrates the memory of the place in public spheres, in line with modern trends. (Figure 7,8)

Figure 1. "Monument of Triumph –Ankara", 1927, Heinrich Krippel, Ulus-Ankara-Turkey.

Figure 2. "Monument of Atatürk in Samsun", 1927, Heinrich Krippel, Samsun-Turkey.

Figure 3. “Republic Monument in Taksim”, 1928, Pietro Canonica, Istanbul-Turkey.

Figure 4. “Monument of National Rise”, 1964, Hüseyin Gezer, Antalya-Turkey.

Figure 5. “The Monument of Hitit Sun”, 1978, Nusret Suman, Sıhhıye-Ankara-Turkey.

Figure 6. “Mediterranean”, 1980, Ilhan Koman, Istanbul-Turkey.

Figure 7. “Being & Lifetime”, 2003, Marble, 450x200x250cm, Olcay Ataseven, Suleymen Demirel University Hospital, Isparta-Turkey.

Figure 8. “Perching”, 2007, Olcay Ataseven, Marble, 180x150x200cm, Suleyman Demirel University- East Campus, Isparta-Turkey.

Bibliography

1. Ataseven O. (2003). Sanatın Çevreye Katılımı (Participation of Art to the Environment), Hacettepe University Fine Arts Faculty 7th National Art Symposium Book*: Art and Environment*, p.16-21. (in Turkish)
2. Cubuk M., Krabey H., Seymen Ü. (1978). Çevre Olgusu ve Çevre Düzenleme (Environment Phenomenon and Environmental Design), *Yapı Dergisi* (Yapı Journal*)*, vol. 26. (in Turkish)
3. Habermas J. (1995). Kamusal Alan: Ansiklopedik Bir Makale (Public Sphere: An Encyclopedic Article), *Birikim Dergisi* (Birikim Journal), vol.70. (in Turkish). [online] [10.01.2015.]. Available at http://www.birikimdergisi.com/sayi/70/kamusal-alan-ansiklopedik-bir-makale
4. Yaman Z. Y. (2002) “Cumhuriyet”in Ideolojik Anlatımı Olarak Anıt ve Heykel 1923-1950 (Monument and Sculpture, as an Ideological Expression of “Republic” 1923-1950), Sanat Dünyamız Dergisi – Kış (Sanat Dünyamız Journal-Winter), vol.82, p.155. (in Turkish)
5. Yaman Z. Y. (2011). “Siyasi/Estetik Gösterge” Olarak Kamusal Alanda Anıt ve Heykel (Monument and Sculpture, as a “Political/Aesthetic Indicator”, in the Public Sphere), Metu Journal of The Faculty of Architecture, Volume 28 - No 1, p. 69-98. (in Turkish)

Mental Well-being of the Company as an Ecological Factor in the Promotion of the Work Environment

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Abstract: The actuality of the article is substantiated by the European Association for People Management (EAPM) they approved the correlation between the enterprises' human resources and understanding of the feelings, emotions, values and behaviour. One of the reasons why enterprises fail is that leaders do not control over the cultural impact of the enterprise on the ecological work environment and its maintenance. The theme is topical because in the enterprises of Latvia no any studies have been carried out what the goal is to diagnose the mental discomfort reasons of personnel. Similarly, the studies have not been conducted out on whether the enterprises have worked out and/or implement the regulations, action plans what way the mental well-being can be maintained and developed in the workplace. Special emphasis is not only the formal value-oriented practice, but also its functional use of mental well-being in the management process in order to build an ecological work environment. The goal of the study: evaluate the world experience and in Latvia the average business owners and / or leaders' perceptions of personnel management obligations with value-oriented approach to personnel management, creating an ecological work environment. In the article there is updated the mental well-being in the discourse of the ecological work environment. The results of analysis of literature and semi-structured expert interviews (N = 5) show that business owners and / or leaders understand the ecological work environment, staff mental well-being; as well as revealing: the owners and / or leaders' willingness to take moral responsibility and the ability to develop value-oriented personnel management, to promote mental well-being of staff and ecological working environment; a framework for further plan to rate the surveys of leaders and / or owners as well as employees; mark the value-oriented mental well-being personnel management principles in the enterprise.

Keywords: ecological work environment, mental well-being management, values orientation.

Introduction

The personnel of the enterprise are the part of society which has always been affected by external processes, conditions and their context. One of the major 21st century features is the transformation-long and purposeful transformation what is often a large-scale event. The transformation covers evolutionary processes, organizations, technology and personnel. The other feature is the changeable intensity that initiates new adjustments and transformation in the personnel's work environment. Gradually, the leaders' competence is improved, at the same time the appropriate development leap is not carried out at the European level what could give an opportunity for Latvian management competences to be next to European national management that is knowledgeable, skilled and capable. There are discovered and mastered the basic personnel development and growth enhancing management principles. On 5th November, 2013 European member states discussed (Congress European.., 2013) the topicality of the personnel management in the framework of the congress what was organized by the European Association for People Management drawing European personnel managers and business leaders' attention to the emotional cooperation between the leader of the enterprise and an employee as one of the general development principles of the enterprise. In the congress there was approved the positive correlation between enterprise's business achievements and understanding of the usefulness of human resource senses, emotions, values and behaviour.

One of the reasons why the enterprises fail is that the leaders do not control the culture impact on the ecological environment and its maintenance. The discussed theme is topical because the establishing the enterprise and providing jobs, the management of the enterprise is delegated the public responsibility for employment health, including mental well-being. However, in Latvia the enterprises have not been studied with the goal to diagnose the reasons of the personnel mental discomfort.

Similarly, the studies have not been conducted on whether the enterprises have worked out and/or implement regulations, action plans what way the mental well-being can be maintained and developed in the workplace. Especially emphasizing is not only the formal value-oriented practice, but also its functional use of mental well-being in order to build an ecology work environment. When health care assessment is carried out, the motivation is closely related to the personnel health, as the one of the main management tools.

The aim of the research was: evaluate the world experience and in Latvia the average business owners and / or leaders' perceptions of personnel management obligations with value-oriented approach to personnel management, creating an ecological work environment. In the article there is updated the mental well-being in the discourse of the ecological work environment.

Methodology

The goal of the empirical study was to find out through the interviews with the experts what the business leaders' understanding about the value-oriented personnel management is, the provision and promotion of employees' mental well-being in the enterprise in order to work out a framework for wider inquiry of the leaders and employees of the enterprises about the value-oriented personnel management and employees as well as their own leaders; promote mental well-being practices in the enterprises of Latvia.

In the creation of theoretical framework of the study there are used: **social constructionism theory**, which representatives emphasize the value adoption of the social dimension; employees and employers' value selection motives in the context of the social background and their interaction results, meanwhile cover a wide range of social context; **modern social theories** (structuralism, post - structuralism) in the sociological context to explain the value of traditionalism and the meaning of the globalization process and intergenerational understanding about the value of the reference system. In the study there are used the social theory approaches of the concept of public risks (Bourdieu, 2004; Bauman, 2002; Inglehart, Baker, 2000; Beck, 1992); **social psychology theoretical approaches** (Eriksen, 2001; Schwartz, Bardi, 2001; Schwartz, 2009; Rokeach, 1973; Fromm, 1955) to study the regularities, social problems of the society, justify the motives and attitude towards the selected priority values and weigh out the value making motives; **axiology theoretical knowledge** or value theory to structure values. In order to describe in detail the value-oriented mental well-being concept, analyzed EU's policy in the mental well-being and the ensuring of inhabitants' health, legislation of Latvia as well as R. Barret's (Barret, 2013) recommendations for the creation of the value –oriented organization.

There are analyzed the contemporary studies on human capital as value of the enterprise; the meaning of value based management in the ensuring of the enterprise. J. Fitz-Enz (Fitz-Enz, 1997) – it means, in a good personnel management the based practices of values are important; a constant focus on the added value, a long-term strategy; proactive organizational culture (learning and development take place by doing); care of the communication with all parties; partnership in internal and external environment of the enterprise; cooperation among all the control functions of implementing sections; risk and innovation, constant research for improvement and implementation. Such concepts are updated, for example, value-oriented entrepreneurs, leaders, value-oriented organizations, relationships of business and social value (Choi, Gray 2011). Nowadays more and more it is emphasis on values, especially ethical values are successful business conditions, values are based on interaction of business. In conjunction with the responsible decision-making, personal values are defined as person's integrity and the integrity is associated with a reputation in the business (Gasparski, Kwiatkowski, 2011, 11 - 23).

There are recognized the value and responsibility in connection with entrepreneurial ability as the capacity of the enterprise (Gasparski, Kwiatkowski, 2011). In the context of axiology there are selected threes"E"-effectiveness, efficiency and ethicality. Within the theory of establishing social system the ethical dimension of business is often ignored (such concepts as a spiritual entrepreneur/ leader) (Gasparski, Kwiatkowski, 2011, 23 – 37). The actual research is on business as an identity of value and expression: *we do what we are* (Conger, York, 2012). The conclusion is that, if

entrepreneur's identity has more important meaning in self-conception that is based on self-transcendental values, then the social objectives are more actual in the enterprise and balance of economic and social objectives of the enterprise are more typical. The studies show the commitment to the well-being and organizational culture of the enterprise as a moderator (mediator) and there are classified by the conditions such as: job personalization (Wells, Thelen, 2007); "healing" of the enterprise (Powley, Piderit, 2008). There can be seen the liabilities with culture of the organization and workplace personalization in the figure (Figure 1).

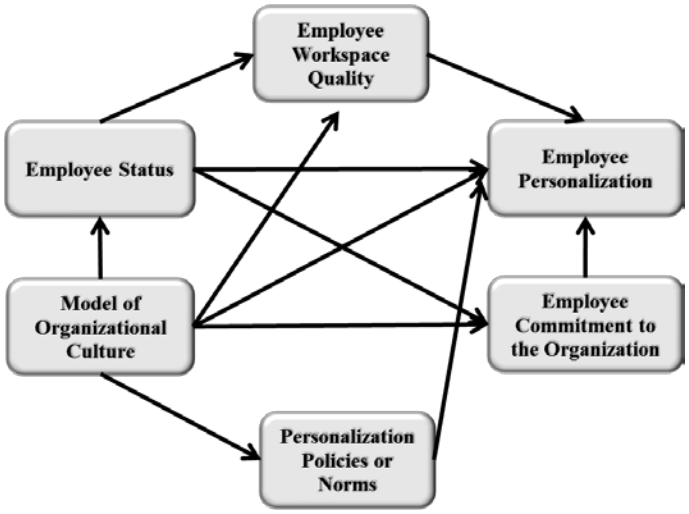

Figure 1. Job personalization (Wells, Thelen, 2007).

The study (Wells, Thelen, 2007) shows that if an employee personalizes the workplace there is higher level of satisfaction with the job, work motivation, a sense of subjective well-being, better physical health condition and rarely intention to leave the enterprise. Therefore, the workplace personalization is related to the value-oriented personnel management and employees' mental well-being.

Health, according to the World Health Organization-on June 22, 1946, is adopted as *a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (definition).* But, the strength of this definition is that the understanding of human's health is not reduced only to the bodily health, but there are also taken into account the mental, emotional and spiritual aspects. By contrast, the restriction of this definition is that the health has been defined as a condition, but not a process. Human's health is one of the well-being factors and it can be maintained, control and develop- so it is a process that requires physical and mental health as a separate component, interactive maintenance. Exact mental health combines the mental, emotional and spiritual health – it is an emotional intellectual balance, readiness to create a productive relationship with the people and to overcome the difficulties. It is considered that good mental health contributes social capital, human capital and economic capital.

A mental health category is closely related to the well-being. According to the definition of mental health, by the World Health Organization, it is "welfare state" where a human "realizes the abilities, can cope with the usual everyday stress, is able to work productively and contribute it into the community's life" (Mental health..., 2014). One of the decisive factors what provides objective guidance in the promotion of the personnel's health well-being and its management has to be diagnosed by the actual situation to find out the correct direction of Latvia and European Community, and as well as the strategy of the world and its correlation with the personnel assessment of individual sense, experience and desired development progress.

In 2008 the "Second European Quality of Life Survey-living conditions, social exclusion and mental well-being" (Otrais Eiropas..., 2008) was carried out by European Foundation for the Improvement of Living and Working conditions where was realized that the welfare of the country has a significant impact on the mental well-being of its people- the countries what are wealthier within the meaning of the GDP, it is also characterized by greater spiritual well-being- the citizens of the candidate countries

and new member countries have reported about the significant low level of mental well-being compared to EU-15 member states.

The modern research shows that spirituality and mental well-being issues are topical for the enterprises, for example, a spiritual paradigm in the organization; soul at work (Bowman, 2004; Benefiel, 2005; Marques, Dhiman, 2014; Russell, 2010). This researchers point out the meaning of the mind-net of business noting that there is link between: axiology (values) and teleology (intentions, will-progress, ambitions); existentialism and pragmatism; ethics and sustainability; in the very centre there is an employee's individuality, personality - such view is defined as a holistic approach.

There are emphasized the spiritual components in the workplace (Rhodes, 2006): sustainability, benefits from the values unlocking the creative potential of employees, promoting the participation (integration of employees' individual life experience in the enterprise), the development of the ethical principles (employees' trust/ confidence in connection with job tasks that contribute the job performance), promoting the challenge.

The important justification of analysing the solution of the problem was carried out in the spring of 2010 when all EU-27 member countries took part in the study of Europeans' state of mental health and its impact on work capacity as well as the number of people who have applied for the assistance due to psychological or emotional problems, using antidepressants (Mental health..., 2010). The survey results allow to point out the hypothesis that the mental well-being has a direct impact on attending work-if, according to the survey, an employed European has not been absent on average of 1,1 day within the last 4 weeks, then more often the employees from Latvia and Lithuania have been absent (one of the lowest indicators according to the positive emotions)-within 4 weeks on average 2,5 days were absent.

According to the survey, more people who are absent from work, feel insecure about their workplace as well as those employees who feel underestimated in their workplace- that allows you to make the statement that the employer's assessment affects employee's mental well-being. On the basis of the statement of the components spirituality in the workplace (Rhodes, 2006), there can be considered that it is important to get recovery- organizational healing (Powley, Piderit, 2008).

The concept "organizational healing" is a metaphor what has been borrowed from medicine, and its essence is: the crisis causes damage in the organization and healing is the process which is chosen by the organization to return quickly back to usual functioning and strengthening for loss recovery (Powley, Piderit, 2008). The healing process involves three stages (Figure 2).

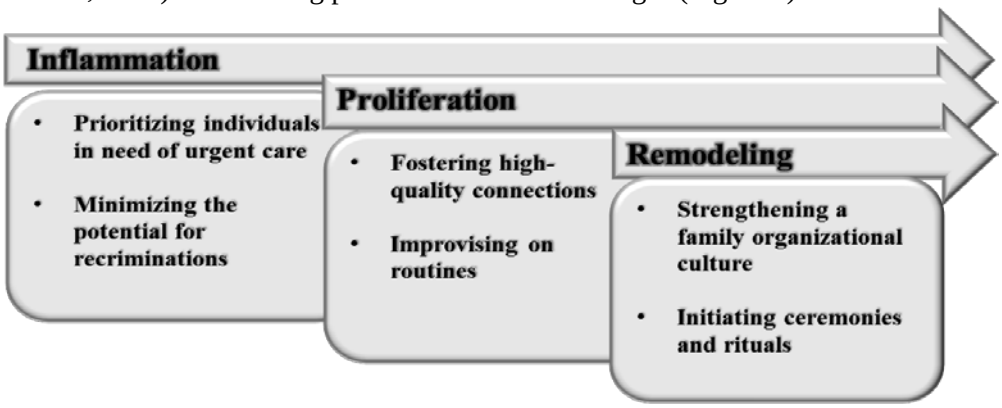

Figure 2. Organizational healing (derived from Powley, Piderit, 2008).

In the first phase of healing-outbreak- it is important to identify the crisis focusing on the prevention of future to the organization and to find resources for assistance; in the second phase it is necessary to make activities to limit the potential repeat of the crisis, therefore, in the healing-base of organization there is the quality of interpersonal relationships and, so, there is the need to improve internal communication; in the third phase the organizational culture strengthens the unity of the organization, therefore, it is necessary to develop the family –type cultural characteristics as well as to strengthen and improve the rituals and ceremonies. The family-type organizational culture according to Cameron and Quinn's classification, the focus is on the flexible decision-making of the organization in the

internal environment, mentoring support. The main value is the participation, the criteria of the performance; human resource development, cohesion, a favourable psychological environment. The family sense in the organization contributes the opportunity to share experience, care of each other what, in turn, strengthens the internal integration, and it is an important healing factor (Powley, Piderit, 2008).

Henceforward in the article, there are analysed the results of experts interviewed for the pilot-study (5). In the pilot-study 3 business leaders were surveyed whose experience of the business has more than 15 years and 2 personnel managers whose work experience of managing the personnel is more than 10 years. The goal of the pilot –study was to clarify in the unstructured interview what is leaders' of the enterprise comprehension about the value-oriented personnel management provision and promotion of employees' mental well-being to obtain a framework for the output of experts' interview questions (N=32). The author of the article created the support questions for the unstructured interview: what and what kind the value -oriented personnel management is; what the spiritual well-being is; what associations, reflections are caused by the term "spirituality in the enterprise, in the entrepreneurship"; whether they consider that in Latvia the value –oriented personnel management has been realized in the enterprise; how it is expressed; whether the enterprises pay attention to the personnel mental well-being; whether they realize the value-oriented personnel management in their enterprise; if, yes, then how; which 3 values they consider the most important for themselves in their entrepreneurship; which 3 values they have been admitted the most important in their running enterprise; how the leader/owner can provide or promote employees' mental well-being. However, during the interview the questions were supported freely varied in order to get more spontaneously managers' opinion.

Results and discussion

During the interview and later after studying that information there was possible to obtain the content units which showed the trends:

1) the leaders believe the value –oriented personnel management is, if there is defined and documented 5 main values which are included in the personnel policy which give a great impact on it, they support, promote, teach and embody the enterprise. However, 3 of 5 enterprises have not formulated in written form. As the leaders have pointed out the values may be contained in the motto, such as-*the sun shines for everyone*- it means, all employees of the enterprise have the same regulations. There are considered the values that are very essential based on humanism, mutual respect and meritocracy (everyone earns according to the invested time and energy). There were named more specific values, such as: respect customers and the team members; competence (professional, social, personal); ambitions (to be the best professional; to be the best in own field of the enterprise). The leaders consider the embody values when the employees are kind and competent-customers are satisfied.

   The leaders believe that mainly the value-oriented personnel management, especially what values are written in the policy of the enterprise, is carried out only in large-sized enterprises. However, one of the experts noted that in reality in small and medium-sized enterprises the value-oriented management is taken into consideration more-approximately 50% of cases while the large-sized ones – 30%, although it is formulated in written form and the expert added that the tendency of value –oriented personnel management is growing in the small, medium and large –sized enterprises. Two of the experts expressed their view that the value-oriented personnel management can be realized by teaching, training and motivating the personnel encouraging employees' self-development

2) the leaders have difficulty with defining what the spirituality is in the enterprise answering spontaneously, 4 out of 5 have said, the first of all, this concept relates to religion. To the question: what associations, contemplation they have the concept of spirituality in the enterprise, in entrepreneurship – one of the experts has said that is leader's identity-based centripetal expansion and he explains, that he has understood it as a leader's self-adequacy- harmony with himself, his own-basis values according to the definite situation, for the context there are pointed

out the goals of the enterprise and its business. Different views are said that the spirituality is to admit a human as a value (2), to encourage employees to see/notice the sense of work by personnel management (3). One of the experts noted that the essence of spirituality is both in individual and corporate level to maintain and promote the liveability. By contrast, the criteria of liveability are linked to personnel's physical, social and mental well-being and to profitable and sustainable, and socially responsible development of the enterprise. By contrast, one of the leaders admitted that in his point of view the spirituality is employee's personal development and promoting the leadership with development: *do not give a man fish, but teach him how to catch a fish*. Another of the experts found that the spirituality is harmony in own person, and such person helps to create harmony in the enterprise, too. Relative is energy balance between internal and external factors, the universal nature law with the tolerance.

3) speaking about the mental well-being, the leaders have said it is also difficult to judge. It is so, the leader asks why an employee does not say that he/she has hard, and in this case the leader shows his readiness to provide some support. In this way the issue of emotional co-operation between the employer and an employee has been expanded, for instance, an employee can ask safely an advice from the leader and the employee is not afraid to make mistake (fear to make mistake hinders the initiative to do). Only one leader has acknowledged that such guidelines have been embodied in the culture of the enterprise.

   To addition question how to understand the mental discomfort, the responses are –mainly it is a condition where personal values, life principles are contrary to the enterprise policy-it is postulates one value, but practically there are others. One of the leaders has said that it is important to learn the compromise art in order to reduce the mental discomfort. **Thus, the value-oriented personnel management is associated with the mental well-being.**

   To another additional question: what the leader contributes the mental well-being of the enterprise. There are received the views; the leader is not demonstrative; the leader "does not play" a victim's role; a lot of them have become the leaders from doing simple job performance and own experience.

4) the responses to the question: if/how the leaders of the enterprise can provide or promote employees' mental well-being. Mainly there have been received the answers that it is very important to provide a healthy work environment: regular salaries and clear principles of social guarantees; good, comfortable physical work environment; a favourable psychological climate; clear requirements, communicate with employees how they understand the requirements and how they are able to fulfil it and the last one-what disturbs to fulfil it. One of the experts stressed that there is impossible to ensure the well-being in the direct way. It is possible to contribute indirectly- taking care of own mental well-being due to the dynamics by the leader and its attitude to himself, employees, enterprise, which in turn, it affects the well-being of employees and unfolds wish to live and work.

5) the experts cannot provide the exact response to the question: how they consider if the enterprise pays attention to personnel's mental well-being. There have been studied different level leaders.

Conclusions

The study results show: to build an ecological work environment is important not only the formal value-oriented practice, but also its functional use of mental well-being in the management process. The questions of the value-oriented personnel management and personnel's mental well-being are important considering that health, including mental health, as one of the factors of well-being is a process that can maintain, control and develop.

Were obtained conclusions about the framework for value oriented personnel management through the mental well-being policies in enterprise: are defined the indicators of the business and social value connection that promote balance between economic and social objectives of the enterprise; the connection of values and responsibility with the entrepreneurial ability; the emotional cooperation between the leader of the enterprise and an employee; management of the organizational cultures

impact on the ecological work environment through the organizational healing approach; improvement of the personnel motivation as one of the mental health conditions; is clearly defined the responsibility of leaders about the mental well-being of personnel.

The empirical study results show: the expert interviews content analysis revealed a relationship to literature analysis identified value-oriented personnel management characteristics and mental well-being indicators. Is identified the problem: the experts say it is not easy to speak about these issues because more often there are not defined clearly for themselves and the enterprise what is the value-oriented personnel management and especially there is the issue about the mental well-being of the personnel. Therefore, it is topical to continue the study and clear up the information of the study.

There is concluded that it is useful to include the experts' interviews (N=35 - 35 leaders have participated from the medium-sized enterprises). There have been such following pilot-research issues:

- how leaders understand the concepts: value - oriented management, mental well-being in the enterprise;
- which values the leaders consider personally relevant and which ones for the enterprise;
- which criteria are to show the enterprise is being implemented by the value- oriented personnel management;
- what criteria are to show the enterprise is being implemented by the mental well-being management principles.

Bibliography

1. Barret R. (2013). Building a Values-Driven Organization. Routledge, New York, p. 227.
2. Bauman Z. (2002). Society under Siege. Polity Press, Cambridge.
3. Beck U. (1992). Risk Society: Towards a New Modernity. Sage Publications Ltd, London, p.272.
4. Benefiel M. (2005). Soul at work: Spiritual leadership in organizations. Seabury Books, New York, p. 159.
5. Bourdieu P. (2004). Science of Science and Reflexivity. Polity Press, University of Chicago, p.23.
6. Bowman T.J. (2004). Spirituality at Work: An Exploratory Sociological Investigation of the Ford Motor Company. London School of Economics and Political Science, London, p. 340.
7. Choi D.Y., Gray E.R. (2011). Values-Centered Entrepreneurs and Their Companies. Routledge, New York, p. 194.
8. Conger M., York J.G., Wry T. (2012). We Do What We Are: Entrepreneurship As The Expression Of Values And Identity. [online] [07.10.2014]. Available at http://cdm.epfl.ch/files/content/sites/mtei/files/shared/mtei_seminars/2012/Identity_EPFL_052312.pdf
9. Congress European Association for People Management, 2013. [online] [07.10.2014]. Available at http://www.cipd.co.uk/NR/rdonlyres/B2080A21-138C-46E1-B84F-04198FC063EE/0/6210EAPMConferenceprogrammeFINAL.pdf
10. Eriksen T.H. (2001). Small Places, Large Issues: An Introduction to Social and Cultural Anthropology. Pluto Press, London, p. 332.
11. Fromm E. (1955). The Sane Society. Henry Holt, New York.
12. Fitz-Enz J. (1997). The truth about best practices: What they are and how to apply them. In D. Ulrich, M. Losey, & G. Lake (Eds.), Tomorrow's HR management: 48 thought leaders call for change (pp. 97-103). John Wiley and Sons, New York.
13. Gasparski W., Kwiatkowski S., Ryan L.V. (2011). Entrepreneurship: Values and Responsibility. Transaction Publisher, New Brunswick, p. 317.
14. Inglehart R., Baker W.E. (2000). Modernization, Cultural Change, and the Persistence of Traditional Values, American Sociological Review, Vol. 65, pp. 19-51.
15. Marques J., Dhiman S. (Eds.) (2014). Leading Spiritually: Ten Effective Approaches to Workplace and Spirituality. Palgrave Macmillan, New York, p. 183.
16. Mental Health. Eurobarometrs, 2010. [online] [07.10.2014]. Available at http://ec.europa.eu/health/mental_health/docs/ebs345_country_national.zip

17. Mental health: strengthening our response, 2014. [online] [06.09.2014]. Available at http://www.who.int/mediacentre/factsheets/fs220/en/
18. Otrais Eiropas dzīves kvalitātes apsekojums: dzīves apstākļi, sociālā izstumtība un garīgā labklājība (2008). (Second European Quality of Life Survey: Living conditions, social exclusion and mental well-being). [online] [06.09.2014]. Available at http://eurofound.europa.eu/sites/default/files/ef_files/pubdocs/2009/881/lv/1/EF09881LV.pdf (In Latvian)
19. Powley E.H., Piderit S. (2008). Tending Wounds: Elements of the Organizational Healing Process, The Journal Of Applied Behavioral Science, Vol. 44, No. 1, pp. 134-149.
20. Rhodes K. (2006). Six Components of a Model for Workplace Spirituality. Vol. 9, Issue 2. [online] [06.09.2014]. Available at http://gbr.pepperdine.edu/2010/08/six-components-of-a-model-for-workplace-spirituality/
21. Rokeach M. (1973). The Nature of Human Values. Free Press, New York, p. 438.
22. Russell M. L. (Ed.) (2010). Our Souls at Work: How Great Leaders Live Their Faith in the Global Marketplace. Russell Media, Boise, ID, p. 275.
23. Schwartz S.H. (2009). Basic Human Values. Cross-National Comparison Seminar on the Quality and Comparability of Measures for Constructs in Comparative Research. Bolzano, Italy.
24. Schwartz S.H., Bardi A. (2001). Value Hierarchies Across Cultures: Taking a Similarities Perspective, Journal of Cross-Cultural Psychology, Vol. 32, pp. 519-542.
25. Wells M.M., Thelen L., Ruark J. (2007). Workspace Personalization and Organizational Culture: Does Your Workspace Reflect You or Your Company? Environment and Behavior, Vol. 39, No 5, pp. 616-634.

The Use of Learning Video in Handicraft Technologies for Adults

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Abstract: This article describes a study on the use of learning videos in handicraft technologies for adult interests' education. Working with adults with different learning rate and different previously acquired knowledge, the use of learning videos, that include visible handicraft technology demonstration step-by-step, provides improvement of adult education. The aim of this study is to explore and justify the need of the use of learning video for adult interests' education, learning the fine handicraft technology from Deco Clay polymer. Pedagogical experiment was carried out in Latvia University of Agriculture in Institute of Education and Home Economics and in the flower formation studio 'Madeira Flowerland' in Jelgava, interviewing studio participants. It was studied how the use of learning video promotes precise learning of the exact flower-making technology. The criteria for assessing the use of learning video were set up. The materials of learning videos for handicraft technology from Japan Deco Clay polymer for adult interests' education were developed and tested in practice. Basic principles of adult education were applied through the process of using the learning videos (continuing education accessibility, connectivity with the own' experience, "learning by doing"); as well as adult education favourable didactic elements (learning in their own home and at the individual rate); individual develops skills to see the proportions, to perceive space, to create flower compositions and improves information technology skills. As a result individual's horizons expanded and personal development took place. Usage of learning video creates the conditions that supports relation between individual's autonomy and competence with her/his own experience, encourages creativity, motivation and personal development during learning process, thus improving learning outcomes.

Key words: adult education, self-actualization**,** learning video, handicraft technologies.

Introduction

Adult education provides life-long development of personality and competitiveness in the labor market. Adult education includes all forms of learning activities after primary education, allowing a person to express him(her)self in various fields, according to the qualifications demanded in the family, workplace, and civil society, and according the individual physical, intellectual, social and cultural suitability. It is a part of an education system that aims to organize learning opportunities after formal basic education for personality expression of each individual, and individual growth as social beings throughout life learning both at work and at leasure (Rokasgrāmata pieaugušo..., 2003).

Importance of today's increasing information and knowledge sets increasingly higher requirements for the individual to be able to fully participate in the processes, to be competitive in the labor market and to improve own quality of life. A growing part of society is no longer satisfied with the level of obtained information, awareness and usage, which was provided by the elementary *literacy and numeracy*. Every individual has life dictated need to understand the necessity of information , search it and use it. Thus the weel-known concept of literacy naturally expands and acquires incomparably higher criteria and the new name of the specific skills - *information literacy*. This means the ability to understand the need of new information, when and what information is required for solving the problem, the ability to find, understand and organize information, to filter the necessary and valid from the enormous information array, then use it, share it with others, create new knowledge (Izglītības sistēmas…, 2006).

Information literacy is also needed for adults who want to operate in non-formal education of interests, to develop a variety of their own skills and learn new handicraft techniques. Extensive and effective usage of information and communication technologies (ICT) can be significant and helpful also for acquisition of various handicraft technologies.

Analyzing the Latvian adult education, as major obstacle mentioned is lack of access to qualitative and varied supply of education for adults willing to work, as well as lack of the motivation and lack of support systems for people who do not feel the desire to learn and therefore are unable to enter the labor market (Pētījumi pieaugušo..., 2005). Adult interest education is financed by the number of finance sources. Adult education may be financed by the employer, a variety of non-governmental organizations, which are aimed at public benefit or the benefit of its members enhancement.

Also municipalities want to invest in education for local government institutions and their employees and for local population, according to priorities of local community development (Iespēja izglītoties..., 2001). However people are ready to pay for further education by themselves, who understand that education is one of the main tools for their employment and increasing family welfare. Therefore, it is important to develop the offer for adult interests education, including offerings of various courses, being what the authors of this paper are doing.

One of the guidelines of strategic continuous education aim encourages to enrich the human personality so that she/he would be enterprising, open for continuous personal development, to find her(his) place in a changing world and to control the quality of their lives. Self-realization is necessary not only in the labor market but also in personal life for individual to survive and adapt to the age (Kalēja- Gasparoviča, 2006).

Information has become one of the most important things in society and everyday life. Acquired education determines ability to acquire new knowledge and skills use them in the practice and to get benefit from it. Nowadays information society actively uses information technologies in everyday life and purposefully promotes its'development. The ability to obtain, preserve and create a new information is a major opportunity to increase the individual's well-being **(**Lūsēna–Ezera, Bārdule, 2013).

Learning is joint process of self-expression, nature and societal cognition. It is also a process of acquiring social experience. David Kolb (Kolb, 1974; cited by Brigmane, 2012) believes that human learning is based on the experience and skills to gain new experiences, to reflect, to conceptualize and to experiment. Skills relate to specific abstract and active reflective thinking and the individual's learning style is dependent on their interaction.

Conditions that support learners' autonomy, competence in relation to her/his own experience, promotes the highest motivation and engagement, including self-learning, improved learning outcomes, learning perseverance, creativity and well-being (Inovatīvi paņēmieni... , 2009).

According to A. Maslow's theory self-actualization is very important for a man. A. Maslow formulated self-actualization quite freely - as full use of talents, abilities, options etc. I thought of self-actualized person not as person who has something added, but as ordinary person who has nothing taken away. Average person – is a human being with suppressed abilities and gifts (Maslow, 1955; cited by Reņģe, 2002).

Self-actualization - this is a permanent process of developing own potentials. This means to use one's own abilities and operation of the mind to do well what one wants to do. Great talent or wisdom are not the same as self-actualization. Many gifted people are not able to make full use of their abilities. Other, perhaps with an average talent, have done an incredible amount.

Nowadays ICT are developing at such a fast pace that traditional teaching methods are no longer able to motivate enough to acquire knowledge. Using IT it is possible to ensure effective teaching and learning (McNeely, 2005).

Medium is characterized by the possibility to perceive it. Medium used in learning process is a pedagogical tool with a didactic or educational goal (Plaude, 2003). In different science industries as well as on everyday level the concept *medium* has several meanings and is structured in groups according to various criteria:

- *natural media*: language of facial expressions, gestures, symbols, writing;
- *artificial or technical media*: those who accumulate information in memory in the form of an image or symbol.

While technical *media* tend to be divided into:

- *audial media*- phone, radio, CD, tape recorder, MP3 player;
- *visual media*- photography, silent movies, fax, SMS;
- *audiovisual media*: television, video, DVD movie (Rubene, Krūmiņa, Vanaga, 2008).

Media in didactics are used for the purposes of training sessions. They help the teacher to plan lessons, they are a means of self-learning for adult learners. Computer expands the didactic options (Rubene, Krūmiņa, Vanaga, 2008). Nowadays training is impossible without media programs. One of the first multimedia training was in the form of text and presentations. Following the development of technologies various kinds of multimedia trainings were developed:

- training programs of text multimedia,
- training programs of video multimedia,
- presentations,
- animations,
- training programs of graphics multimedia,
- CD encyclopedias,
- games,
- audio training programs.

Z.Rubene, A.Krūmiņa and I.Vanaga mentioned that according to the view of scientist V.Pengerota advantages of contemporary film or video recordings are:

- it can be used in all stages of education,
- it can be used in different study subjects,
- using the video records it is possible to see and understand those processes that otherwise would be difficult to catch on,
- video can also be used for the purpose of education, after-school education and adult further education (Rubene, Krūmiņa, Vanaga, 2008).

Learning videos provide a self-regulating learning.-This means that adults independently set their own objectives and plans. Self-regulated learning is a process in which individuals personally activates and keep its own emotions, motivations and actions that are systematically oriented towards personal targets (Briede, 2014

Video attachments can be added in addition to the textbooks or methodological means creating thematically related training tools, thus providing an opportunity to diversify the curriculum learning (Matisāne, 2010).

Multimedia learning postulates that an optimal learning occurs only when verbal and visual material is presented synchronously. It is based on Allan Paiva 8 dual coding theory. Multimedia learning theory is developed by teacher-psychologist Richard E. Meyer. He performed a variety of studies that confirmed the effectiveness of the theory. During the learning process with the help of media, human brain have to code two types of information: visual and audio. It can be assumed that these competing sources of information tend to burden the learners. However psychological studies have shown that verbal information is easier to remember when it is presented together with the visual image (Meyer, 2009, cited by Nigamatzjanova, 2012).

The aim of this study is to explore and justify the need for the use of learning video for adult interests' education, learning the fine handicraft technology from Deco Clay polymer in the flower studio "Madeira Flowerland".

Methodology

The authors' experience in handicraft technologies and their widespread use in practice both in adult further education and various artistic product development, contributed to the choice of the subject of this study. It was found that using a training video with visible step-by-step demonstrations, can provide more effective learning process. After graduating the bachelor's program and acquisition the Japanese Deco Clay Academy instructor certificate in 2013, the author Madara Boldisevica has

created a flower formation studio " Madeira Flowerland ". Studio offers to acquire the flower-making technology. Working with adults with different learning speed and previously acquired knowledge, equally effective demonstration of all the work progress is difficult.

The author M.Boldisevica has developed the training video that will help trainees to observe the working process in close-up view, if necessary, it is possible to watch them several times, stop, watch in slow motion. In this way the understanding and self-learning were facilitated, where everyone can learn at their own preferred time and speed. Training videos are served as an additional method of acquiring the flower-making technology both in the presence and to work independently at home by strengthening the gained knowledge. The materials of learning videos for acquiring handicraft technology from Japan Deco Clay polymer for adult interests' education were developed and tested in practice. The criteria for assessing the use of learning video were set up by both authors (Table 1).

Table 1

Learning videos' criteria of evaluation

(authors' design)

N	Description of the criteria	agree	partly agree	not-agree
1.	Adult learning principles are followed: - increase of lifelong learning (continuing education) availability, which is an important principle in adult education (guaranteed universal access to training); - adult education principle is provided - "learning by doing"; - creative development of adults is provided; - the development of innovative activity in the learning process is encouraged; - a link to an adult's own experience is provided.			
2.	Favoured didactic elements for adult education are provided: - learning in their own home is provided; - acquired different cultural environments (in this case the Japanese cultural elements); -learning does not depend on the participant's age; - a variety of training forms can be used – full time learning, part time learning, self-education or combinations of them (self-regulated learning is ensured); -learning may take place in individual speed, it is not necessary to align with the group working speed.			
3.	Developments of skills: - improving computer skills; - develops the ability to perceive space; - develops the ability to see the contours (boundaries); - develops the ability to see the proportions; - develops the ability to perceive the common image; - develops the skills to shape flower composition according to the Japanese technology; in accordance with the basic principles of making compositions.			
4.	Development of personality takes place: - there are favourable conditions for human self-actualization process, for development of own potentials, self- improvement, personal development; -there are favourable conditions for fulfilment of own interests, the resulting learning, broadening horizons; - success motivates for further development.			

Pedagogical experiment was carried out in Latvia University of Agriculture in Institute of Education and Home Economics and in the flower formation studio "Madeira Flowerland" in Jelgava, interviewing studio participants. 20 respondents aged between 17 and 68 years were involved in the

research. The average age of respondents were 37.7 years. The majority (14 respondents) were living in the city, while the rest (6 respondents) were rural residents. The respondents were from various Latvian cities and rural areas. During the experiment respondents carried out practical work and filled in the questionnaire. It was studied how the use of learning video promotes enhanced learning of the exact flower-making technology, what are the benefits of using video technology in handicraft training, what skills are developed.

Adults are interested in acquisition of various handicraft technologies and use the practical products in their lives. The authors offer the methodology of flower-making from Japan Deco Clay polymer via training videos. To find out what are the benefits of using learning videos for handicraft technology training, developed evaluation criteria are displayed in Table 1.During the experiment the respondents had to participate in workshop, had to make a flower using the offered video material, and had to evaluate according to the criteria of this process filling in the questionnaire and giving the responses: "agree," "partly agree" or "not-agree" (Table 1).

Results and discussion

Nowadays diversity of personalities is a necessity. In constantly changing world innovations enter everyday life becoming one of the main factors of development. Therefore the human creative thinking, imagination, skills, diversity of creative activity becomes development condition of life activity (Brigmane, 2012).

Respondents' assessment of the video material shown in Figure 1 and 2 (Figure1, Figure2). All 20 respondents, after carrying out practical work, admitted that these learning videos are useful for making flowers from Japan Deco Clay polymer. They said that they would willingly use them independently in their home and in their own preferred individual speed, because video shows the successive steps in all activities, allowing to do the work independently.

During the practical workshop it was observed that the participants have a different speed of work and the same tasks are performed over different time periods. 85% of respondents said that the video was very perceptible and understandable, and that it increases the availability of lifelong learning and allows „learning by doing", that means practically carry out the work parallelly watching video. After the experiment during discussions the respondents admitted that suitable technical equipment for video demonstration would have to be available. 80% of respondents agreed that learning does not depend on the participant's age. Part of respondents expressed the view that age could be a barrier to acquire this technology, but the authors believe that each respondent made the practical work according to their abilities. 60% of respondents agreed that learning is an innovative process and it allows the use of various forms of training (70%) (Figure1).

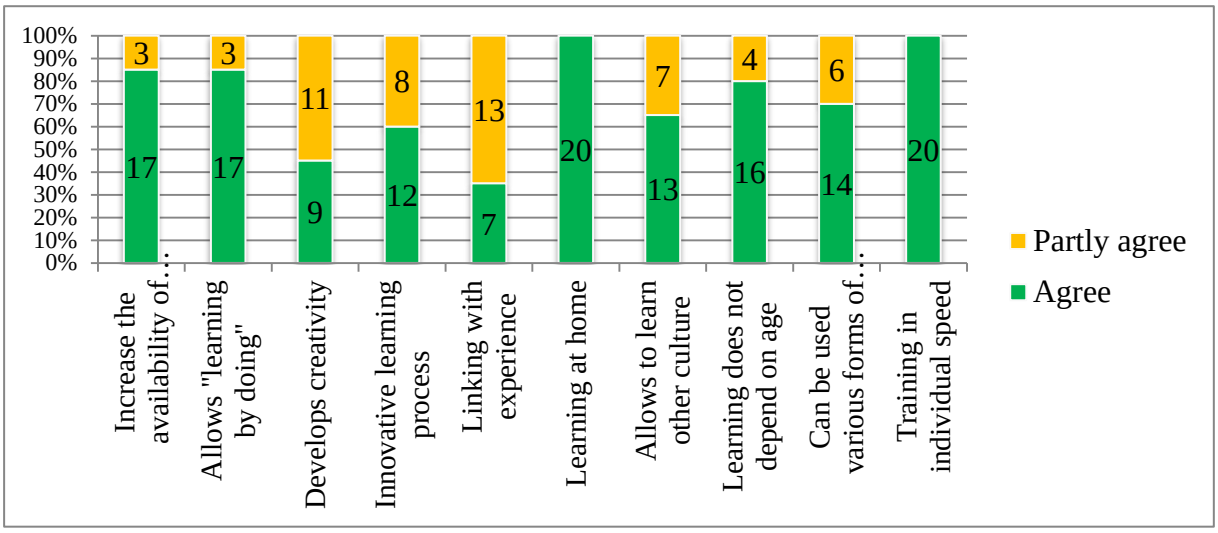

Figure 1. Respondents' opinion about usage of adult learning basic principles and didactic elements in the authors' created learning video on flower development methodology from Japan Deco Clay polymer (number and %).

Training video in flower making courses have not been used so far, and have not previously created a training video for this training program. During discussions respondents positively assessed that each step they can watch, pause, and to repeat it themselve, and only then continue with work. 35% of respondents indicated that the use of learning video provides a link with previous experience. Overall authors conclude that the above mentioned basic principles of adult learning and adult education favored didactic elements are provided using offered training videos.

90% of respondents said the training video promotes flower shaping according to the technology, 85% agreed it contribute to broadening horizons. Respondents expressed the view that the training videos are a good source of information about different processes. Different skills such as: to perceive the common image (75%), to see the proportions (65%), to perceive space (50%), to see the contours (40%) are developed using a training video (Figure 2).
Only 5% of respondents did not receive the desired result of using learning video, does not develop the skills to perceive space, does not help to see the proportions and contours. Overall the training video also does not help to improve the skills of computer use (70%), because the video is intended only for watching. The authors clarified that the majority of respondents think that particularly complex computing skills are not necessary just for watching such videos, it is enough with average knowledge of the computer. Thus the use of video training could not improve the existing computer skills.

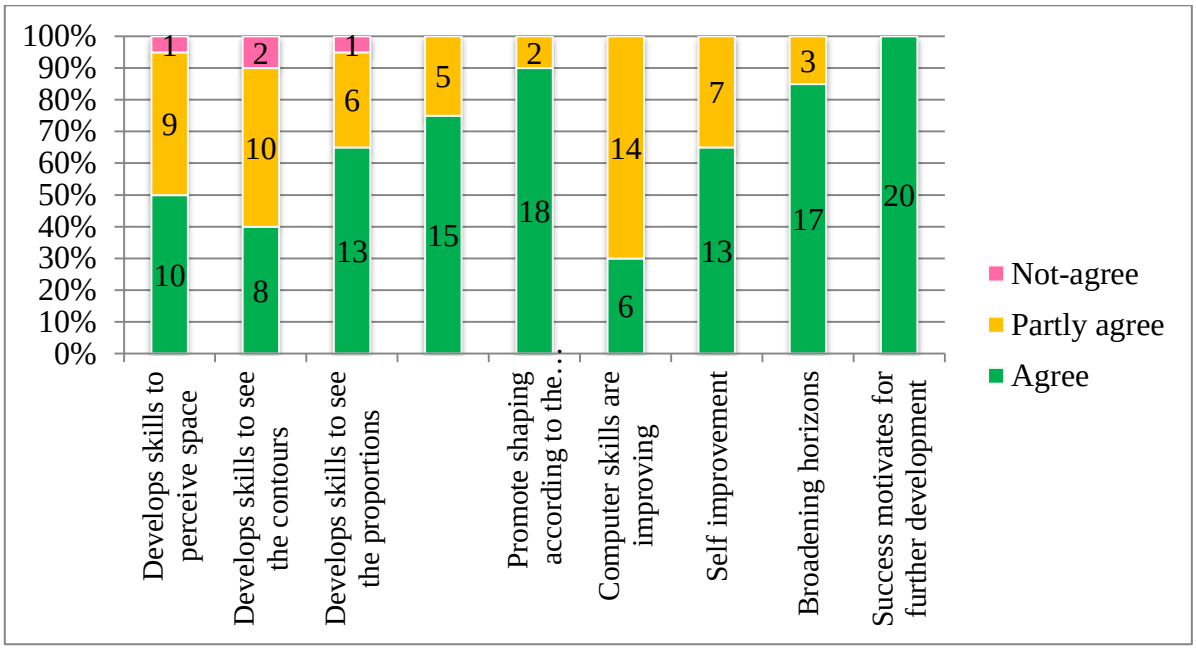

Figure 2. Respondents' views on development opportunities of adult' skills and personality, working with the authors' created learning video on flower development methodology from Japan Deco Clay polymer (number and %).

65% said that during practical work self-improvement occured. All 100% of the participants expressed the view that the success motivates further development and rises the desire to work again and again (Figure 2). All respondents agreed that a good learning outcome motivates further development. After carrying out practical work participants of experiment could pick up residues of polymer material to operate independently at home and all used this possibility. People still wanted to work with this material and already during the lessons rised creative ideas for future works. Overall it could be concluded that the use of learning videos develops the above mentioned skills and personal development is encouraged. When respondents were asked for wich technology acquisition learning videos would be necessary, the most frequently indicated answer was cooking and different handicrafts (knitting, crocheting, beading).

The works developed by participants during the experiment were evaluated on four criteria: the quality of petals, petals' composition in accordance with the technology, the quality of roses flower, the quality of the finished work. Assessment was carried out by the authors' evaluating each criteria by "meets" or "partially meets". Evaluating the practical works, made watching the training video, the authors conclude that the petals' composition conform to the technology and complies with the model in 95% of cases (Figure 3).

Respondents were asked to take one of 3 different optional tasks- to create a brooch, a gift box or a decorative mirror. 12 respondents created a brooch with rose flowers, 4 created decorative mirrors and 4 made a gift box with roses flowers. The most common errors were made in the same petal creation, 55% of the participants had errors (Figure 3). Participants first tried to reproduce the right shaping technique played in the video, however after a moment they moved to the most easiest shaping style, which was incorrect, so the work was inaccurate. Understanding the errors participants more closely focused on the the right shaping technique played in the video. The quality of rose flower was perfectly appropriate for half of the members and for the other half it was only partially adequate (Figure 3). The authors explain that the main troublesome factor might have been adult excitement, fatigue or lack of skills. The authors noticed that most often there was found lack of flower quality, because adults want to accomplish work faster and became superficial.

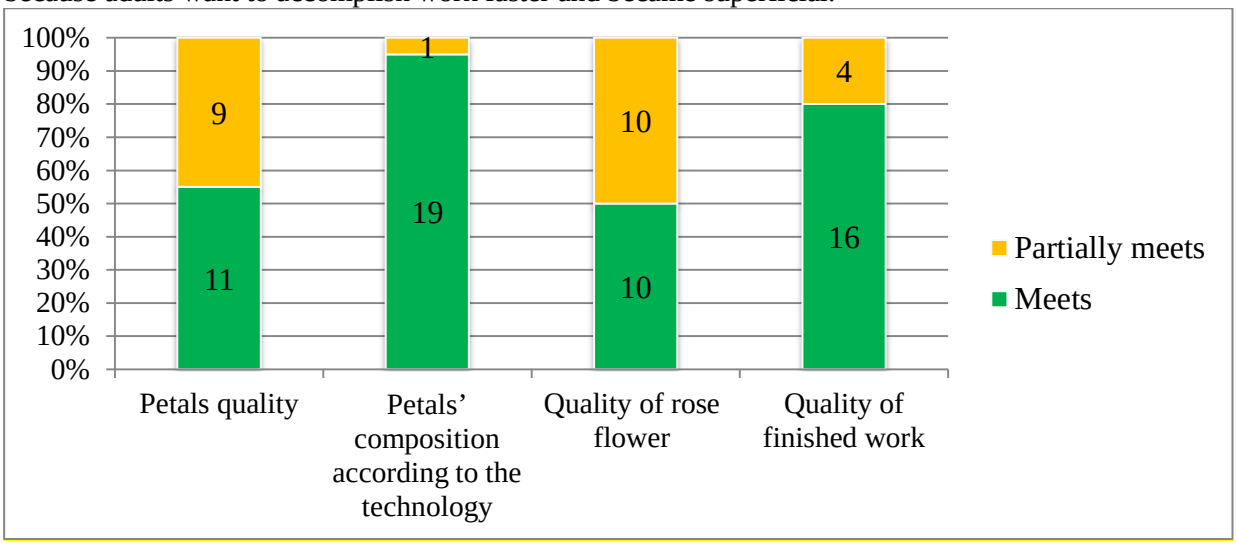

Figure 3. The analysis of practical items (flower compositions created from Japanese Deco Clay polymer) produced by the participants involved in pedagogical experiment using the training video (number and %).

There was observable progress with each further work done creating 3 flowers one after another. The first flower shape was difficult and it took more time, it was necessary to repeat some of the action steps several times. However, creating the third item, adults often already knew the next step in the operation, they were able to assess mistakes made. The authors conclude that overall result of practical work was positive, adults were satisfied with the work accomplished and all workshops were spent in a creative and positive atmosphere.

The positive aspect is the use of ICT adults can access learning materials at any time. Texts, images, video and sound files are easy to access, they can download and use the learning materials using available devices (computer, tablet, mobile phone). This facilitates the learning process and makes it informatively richer and more interesting.

Most of European countries recommend the use of a variety of devices during the learning process - computers, projectors, DVD, video, televisions, cameras, interactive whiteboards, mobile phones, e-book reading applications and virtual learning environment, which have been integrated with a number of ICT infrastructure to create a personalized online learning area (Lūsēna-Lake, Bārdule, 2013) and the authors fully agree.

The new ICT including learning videos provides exciting opportunities to raise the quality of education. Interactive software, open access to digital libraries, video access and new forms of interaction between learners and educators are only some of the ways in which the technology can be integrated into adult education. (Kvalitatīva izglītība nākotnei, 2011). Also the authors fully agree and both are active contributors to the expansion and implementation of adult continuing education.

According to the authors view using the innovative learning videos increases adults' motivation to learn, as well as improves learning outcomes; also knowledge and skill set of the use of computers is helpful. Using a variety of teaching methods teachers' and learners' roles are changing with an emphasis on cooperation. Within implementation processes of these forms of cooperation, adults, teachers and modern technologies play important role, therefore generally providing a successful learning process and activating adult creativity.

Conclusions

- Adult education is personal development process including self-actualization and strengthening of own potentials, improving own ability to do well what one's wants to do.
- To be able to use learning videos, skills of using ICT are increasingly important in acquiring handicraft technologies for the development of personality.
- As a result of pedagogical experiment it can be concluded that the use of established and tested in practice training videos for learning handicraft technology (making flowers from Japan Deco Clay polymer) respects basic principles of adult education (availability of further education, "learning by doing", training is not dependent on age, the link with the own experience), as well as there are provided favorable didactic elements for adult education (learning at home and in individual speed); and individual develops several skills: to see the proportions, to shape the flower composition according to the technologies, to perceive the common image, additionally self-improvement and broadening persons' horizons takes place.
- Usage of training videos creates conditions that supports an individual's autonomy and competence in relation to her/his own experience, encourages creativity, motivation and self-learning, thus improving learning outcomes.

Bibliography

1. Briede B. (2014). *Studentu* pašregulētās *mācīšanās veicināšana*. (Promotion of students' self-regulated learning). Konferences materiāli *Studiju kvalitāte: Pašnovērtēšana un pilnveide. Dažādu projektu devums studijās un jauno iespēju izmantošana*. (Study quality: Self-evaluation and improvement. The contribution of various projects and studies in the use of the new opportunities). LLU, Jelgava, Latvia [online] [30.03.2015]. Available at http://www.llu.lv/getfile.php?id=76853 (In Latvian)
2. Brigmane B. (2012). *Pieaugušo pašpieredzes veidošanās mācīšanās procesā* (Formation of Adult's self-experience learning). Promocijas darbs (Doctoral Thesis). RPIVA, Rīga, Latvia. (In Latvian)
3. Geske A., Grīnfelds A. (2001). *Izglītības pētījumu metodoloģija un metodes* (Methodology and methods of educational research). Raka, Rīga, Latvia. (In Latvian)
4. *Iespēja izglītoties katram* (2001). (Educational facilities for each). Latvijas Pieaugušo izglītības apvienība, Rīga, Latvia. (In Latvian)
5. Izglītības sistēmas informatizācijas programma *Informācijas un komunikācijas tehnoloģijas izglītības kvalitātei.* Programma 2007-2013 gadam. (2006). (Programme of Educational System *Informatization and Communication Technologies for Education Quality*. Programme for 2007-2013 year). [online] [22.12.2014]. Available at http://polsis.mk.gov.lv/LoadAtt/file15059.doc (In Latvian)
6. *Inovatīvi paņēmieni pieaugušo motivēšanai mācībām* (2009). (Innovative techniques to motivate adults to learn). (Eds. Vacaretu A.S., Steiner F., Kovacs M.) [online] [22.12.2014]. Available at

http://www.iac.edu.lv/assets/Uploads/Projekti/CreMoLe/materiali/ISGuidebookLV.pdf (In Latvian)
7. Ivanova I. (2014). *Modernās tehnoloģijas mācīšanās sekmēšanai* (Modern technology to promote learning). [online] [22.12.2014]. Available at http://www.col.lv/LV/Modernas%20tehnologijas%20macisanas%20sekmesanai.htm (In Latvian)
8. Kalēja- Gasparoviča D. (2006). *Vizuālās mākslas apguve radošās pašizaugsmes kursā skolotāju izglītībā* (Acquiring Visual Arts in the creative personal development course for teacher education). RPIVA III Starptautiskā zinātniskā konference *Teorija praksei mūsdienu sabiedrības izglītībā*. Zinātniskie raksti (Scientific proceedings of III International Scientific Conference *Theory for Practice in Education of Contemporary Society)*, RPIVA, Rīga, Latvia. (In Latvian)
9. Kolb D.A., Rubin I.M., McIntyre J.M. (1974). *Organizational Psychology: A Book of Readings*, 2nd edition, Englewood Cliffs, N.J., Prentice-Hall.
10. Kvalitatīva izglītība nākotnei. (2011). (Qualitative education for the future). Pasaules Izglītības darbinieku arodbiedrības (Education International) sestā kongresa rezolūcija (World Education Workers' Trade Union Sixth Congress resolution) [online] [22.12.2014]. Available at http://www.lizda.lv/content/files/EI_rezolucija_2011_lv.pdf (In Latvian)
11. Lūsēna–Ezera I., Bārdule K. (2013). *Tehnoloģijas mūsdienu skolā – nepieciešamība un izaicinājumi* (Technology of modern school - the need and challenges). Biznesa Augstskolas Turība konferenču rakstu krājums *Radīt nākotni: komunikācija, izglītība, bizness* (Conference proceedings *Creating the future: communication, education, business*). Turība, Rīga, Latvia, 221-232 lpp. [online] [22.12.2014]. Available at http://aurora.turiba.lv/editor/Conference14/vBook/proceeding/common/proceeding.pdf (In Latvian)
12. Maslow A. H. (1955). Deficiency motivation and growth motivation. In M. R. Jones (Ed.), Nebraska symposium on motivation (pp. 1-30). Lincoln: University of Nebraska, USA.
13. Matisāne I. (2010). *Kā valstī notiek mācību līdzekļu izstrāde* (How educational training tools are developed in the country?). [online] [22.12.2014]. Available at http://www.lvportals.lv/skaidrojumi.php?id=209853 (In Latvian)
14. Mayer R. E. (2009). Multimedia learning (2nd ed). New York: Cambridge University Press.
15. McNeely B. (2005). Using Technology as a Learning Tool, Not Just the Cool New Thing, *Educating the New Generation, Ed. Obliger D.G., Obliger J.L.,* Chapter 4., e-book, EDUCAUSE, (4.1 - 4.10) [online] [22.12.2014]. Available at http://www.educause.edu/research-and-publications/books/educating-net-generation/using-technology-learning-tool-not-just-cool-new-thing
16. Nigamatzjanova O. (2012). Mācību materiālu izstrāde priekšmeta „CNC manuālā programmēšana" (Training materials for the subject "Manual CNC Programming) [CD]. Jelgava: Latvijas Lauksaimniecības universitāte, Jelgava, Latvija. (In Latvian)
17. Rubene Z., Krūmiņa A., Vanaga I. (2008). *Ievads mediju pedagoģijā.* (Introduction to Media Pedagogy). Mācību grāmata: *Teorija. Pieredze. Prakse.* (Textbook: *Theory. Experience. Practice.*) RaKa, Rīga, Latvia. (In Latvian)
18. Reņģe V. (2002). *Organizāciju psiholoģija* (Organizational Psychology). Kamene, Rīga, Latvia. (In Latvian)
19. *Rokasgrāmata pieaugušo izglītības pasniedzējiem* (Handbook for teachers of adult education). (2003). Latvijas Pieaugušo izglītības apvienība, Rīga, Latvia. (In Latvian)
20. *Pētījumi pieaugušo pedagoģijā* (Studies of adult pedagogy). (2005). LU Pedagoģijas un psiholoģijas fakultāte, Rīga, Latvia. (In Latvian)
21. Plaude I. (2003). *Sociālā pedagoģija* (Social pedagogy). RaKa, Rīga, Latvia. (In Latvian)

Didactic Usability of the Information Communication Technologies in Home Economics and Technologies Lessons

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Abstract: Using information and communication technologies (ICT) in education gives an opportunity to use all the technological advantages. If the computer at school recently was associated only with the teaching of informatics, then today is used also in other study subjects. Usage of ICT can serve as a tool for preparing *Home economics and technologies* lessons, for frontal visualization of data, as well as for organization and evaluation of students' practical work. The aim of the study is to explore and justify the didactic usability of ICT in the study subject *Home economics and technologies* in elementary schools; design and approbation of the developed evaluation tests in textile technologies using the software package "Tests". The study was conducted in Latvian University of Agriculture (LLU) in the Institute of Education and Home Economics (IMI) and in ten different regional schools of Latvia. Teachers of the study subject *Home economics and technologies* and the university lectures were involved. As a result the didactic usability of ICT facilities was theoretically established. Practical tests were developed and tested in the study subject *Home economics and technologies* with a choice of textile technologies in: knitting, clothing, weaving and sewing. Tests were developed using the P.Caune's software package "Tests" foreseen for preparation, filling and knowledge assessment. Didactic usability of the ICT in *Home economics and technologies* lessons for preparing theory explanation includes: preparing video material and creation of presentations; for implementation of practical workshops: creation of different compositions, use of picture or photo, drawing, designing patterns for clothing, preparing examination papers, test-building in e-environment; making crossword puzzles. The most important thing in any learning process about didactic usability of ICT is to prepare teachers to understand their teacher's role and learn to respect the learners' autonomy, authenticity, learning styles and motivation. Didactic use of ICT provides a modern *Home economics and technologies* teaching and learning, increase learning effectiveness, develops students' ability to learn, as well as prepares pupils for life in modern information society.

Keywords: education in school, didactics, ICT, evaluation tests in Home economics and technologies.

Introduction

With the development of information and communication technologies (ICT) the union "man – computer" has become an urgent issue that affects not only specialists, also society as a whole. Today's information society requires to know how to use and operate with ICT. While introducing ICT in education occurs an opportunity to use technological advantages such as: to connect moving and unmoving images, to insert audio and video materials, to create tests, to use voting machines. Therefore it can be assumed that interaction between the human and the computer is communication since it has not only informative, but also spiritual character; and learning process is mutually enriching and interaction of laborious nature (Agejevs, 2005). The range of available learning technologies has rapidly increased with development process of the schools' ICT infrastructure. Modern ICT qualitative and quantitative progress has been happening in unprecedented pace and rapidly expanding use of technologies. Similarly explains professor J. Grundspeņķis (2009) that cybernetics is the science of control and communication in systems. Cybernetics looks at three systems' characteristics: high system complexity; system–probability (stochasticity); self–regulation of system. An important contribution of the process of introducing ICT in schools are: the updating of computer hardware, software, network and staff development. They are seen as valuable if there is evidence that they have made a real impact in raising student achievement (Ķikāns, 2009).

According to authors' working experiences intensive use of mobile technologies among school students can be observed. Consequently authors conclude training becomes interesting using new technologies, challenging and exciting from point of view of both the teacher and the learner. It

improves quality and attractiveness of education and increases learners' motivation to learn. Mobile technologies are becoming increasingly accessible and taking into account its' attractiveness for the students, they are gradually introduced to support a variety of educational initiatives, especially those that focus on the communication process. Laptops that teachers find useful for teaching, management and administration processes with much less enthusiasm are perceived among students because they are attracted by the news of a smaller-sized technologies, such as tablet PCs and multifunctional mobile phones.

The aim of the study is to explore and justify the didactic usability of ICT in the study subject *Home economics and technologies* in elementary schools; design and approbate developed evaluation tests in textile technologies using the software package "Tests".

The use of ICT in the learning process

At present ICT integration in education in different study subjects or courses is significant. Consequently, these technologies appear in a new role – it has become a real theoretical and practical basis for other study subjects as a new practical tool for teaching and learning (Vronska, 2012). As pointed out by T. Koenrad (Koenraad, 2008) effective use of technologies is an essential component to the success of improving student learning in 21st century education. Integrating ICT in pupils' learning could be helpful to streamline lessons' preparation, thereby increasing the productivity of teachers.

Impact of ICT on learning and teaching indicates that there is the most effective use of ICT in improving the learning experience, where teachers have been able to integrate together a range of technologies such as computers, interactive whiteboards and the Internet. Such an integrated approach in scope of hardware, software and connectivity allows educators to develop innovative approaches to learning and teaching processes.

A high level of knowledge is a precondition for full understanding of a phenomenon or principles of some process, meaning wisdom (Figure 1). Wisdom gives an individual the ability to use their knowledge for creating new knowledge, for some operations or for reaching any purpose.

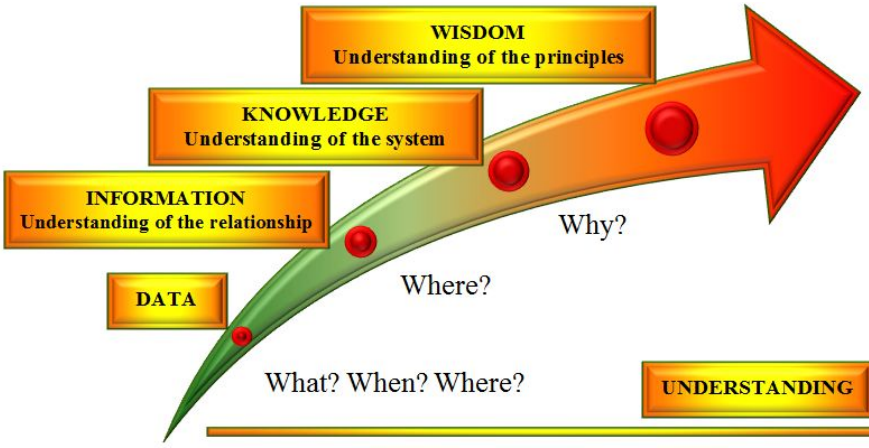

Figure 1. Raising the growth of understanding in the processes of knowledge (Karnītis, 2004).

Human is the most comprehensive, widely known and clearly understandable information processing system. Though man is not only a natural system that is able to process information (Karnītis, 2004).
The classical didactic principles should be taken into account during the introduction of ICT in the learning process, because didactics as a science:

- theoretically justify the practice, define the nature of the learning process: systematise knowledge about the learning process, explains the facts and phenomena, formulate law and regulations that reflect practice; established theories serve as a source of research;
- serves as an orientator for practical action for development of learning process. Acquired theory helps the teacher to make decisions quickly and provide educational ambition. As any theory didactics has a legislative function - it defines the conditions to help the teacher to

design practice and create favorable conditions for the development of the pupil's individuality (Žogla, 2001).

In addition within computer-based training one can identify two new principles – the personalization of learning and activity. Based on such exercises training are being explored in two directions – visualization of teaching content and training algorithmization (Cuban, 1993). Computer-aided training is a new methodical system, which allows the pupils to see not as objects but as subjects of the study process and the computer as a learning tool. Pupil move in a new category because of a computer study is the individual and permanent but are being implemented by the common methodology of the training program.

Specialist of ICT S. Sproģe (2007) has described how the basic didactic principles of learning theories can be realized in training:

- *scientificity* – determine the content of teaching, which needs to include not only traditional knowledge but also the basic directions of modern science and its future perspective; wide use of ICT provide scientificity of learning content;
- *systemic approach* to curriculum outline is providing with their structuring, dividing the basic concepts and their interrelations. The curriculum which is structured and divided into different levels of difficulty allows the pupil to include in training not only the themes that provide the required minimum level of knowledge, but also to look at the subject in question in wider terms, increasing the pupil's horizons, build his knowledge much more fundamental, to link the knowledge of the content to other subjects, learning their interrelationships and effects;
- *the principle of availability* of computer–based training moves from the general accessibility to the individual and it is seen as a chance of reaching of learning target. Computational study material offers to pupils: a variety of its acquiring possibilities, the time required for the acquisition, the help to understand different indications, explanation and additional tasks, to give feedback, rise up learner motivation at different levels of learning content;
- *the principle of visibility* – the computerized training could also be called as interactive visibility. The advantage is that pupil can perform various manipulations with either of objects, thus acquiring material not only in static but also dynamic way and under different conditions;
- *systemic and sequencing principle* is related to the creation of training material and operating pupil's learning system while acquiring the material.

There has been significant progress in providing online learning resources used at many areas of study, obtaining the following resources from various sources - both commercial and publicly available (Holmes, Gardner, 2006). For example, the learning process has much more valuable benefit from a wide range of online learning resource availability, as well as from a variety of technologies, such as digital video and photos. On the other hand, animation and simulation have allowed students to learn complex concepts in mathematics and science. Such training tools are particularly effective. Advanced usage of e-resources will make the learning process more interesting, challenging and exciting for both the teacher and the learner's point of view, not only improving the quality of education, but also by increasing learners' motivation to learn. Nowadays usage of electronic or e-learning methods is increasingly becoming a part of learning process of many schools. Consequently technological support to e-learning becomes of great importance, including a variety of e-learning systems.

Materials and methods

The software is a very important condition in order to allow high-quality computer based training. Every year it is supplemented with both professionals in the field, and the teacher designed programs. Within the framework of this research P. Caune's developed test creation tool software package "Tests" is used, which is foreseen for the teaching test preparation, filling and student aptitude test (Caune, 2002).

On the base of software package "Tests" and considering Dz.Betels (2003) advice to test building, there are developed and practically aprobated tests - *knitting, clothing, weaving and sewing* in the study subject *Home economics and technologies* with a choice of textile technologies for grade 8. The

study was conducted in Latvian University of Agriculture (LLU) in the Institute of Education and Home Economics (IMI) and in ten different regional schools of Latvia: Brocenu Secondary School, Olaine Secondary School No 1, Jelgava Secondary School of Technologies, Elementary Schools of Cesis, Livu, Marsenu, Mengele, Ramuli, Striki, Vecsaule. Twelve school teachers of the study subject *Home economics and technologies* were involved in approbation of the author's tests and they answer questionnaire about usage of hardware in school and about usage of different test design tools in the study subject *Home economics and technologies.* Respondents were aged 29 - 55 years. Friedman test is used in the research.

Results and discussion

The learning process is often described as a series of phases involving teaching, studing, learning, assessment. According to this line of thinking, teaching affects studying, and studying leads to learning, which is then assessed. In practice, good teaching involves continuous assessment that supports learning.

(Löfström, Kanerva, 2006). Assistant professor I. Lice (2012) anlyzing changes of direction of Home economics and technologies study subject emphases the increasing usage of information technologies and the self-reflection of pupils as as important factors in the development of home economics education. ICT is used in education for supporting students learning or for development of competences, in other words for helping to reach the goals of education. The quality of learning depends on how ICT is used in learning (ICT in Initial..., 2009).

The educator essentially is a change stimulator and promoter. She/he shall do so with the deliberate purpose to guide and to influence the pupils' life with her/his knowledge and ability, with an understanding of the modern economy, politics, social life and its contradictions. It is important to use all the technological possibilities: connect text in multimedia, three dimensional graphics, work with images, create audio and video materials; create tests; use a variety of specialized software, which not only diversificates but also facilitates and enhances the learning process (Vronskis, Vronska, 2011).

The authors believes that the computer can significantly change the learning environment of the school. Availability of a computer at school recently was associated only with the teaching of informatics, however today it has significan influence to other study subjects. It is necessary to diversify the teaching of study subjects by using modern, progressive teaching techniques. For the teacher of *Home economics and technologies* the computer can be as a tool for preparation of lessons, for frontal data visualization as well as for organization and evaluation of students' practical work (Figure 2).

The computer belongs to a technical training tools that could be useful in different learning stages: preparation of lessons, training organization, workshops and training evaluation.

Learning opportunities offered by ICT:

- source of information;
- rationalization of teaching learning material forms;
- increase the visibility level, specify concepts: phenomena and events;
- organizes and directs perception;
- enrich the students' perceptions, satisfy their thirst for knowledge;
- fully comply with the scientific and cultural students' interests and needs;
- develops the emotional attitude to learning information;
- reinforces the interest of learning through an original, new construction technologies;
- makes available such subject matter what would not be available without ICT;
- activates the cognitive activity, facilitates informed student learning process, develops thinking and spatial imagination, perspicacity;
- the tool of repetition, generalization, classification and knowledge control;
- illustrates the link between theory and practice;

- creates conditions for more effective teaching forms and methods of use, helps totality realization of the fundamental principles of the pedagogical process: from the simple to the complex, from the near to the distant, from the specific to the abstract;
- saves time spent on training also energy of the learner and the teachers, thanks to the information compactness of teaching and increasing the speed (Коджаспирова, 2004).

So the use of ICT in education offers many opportunities, but probably the greatest value is not turned to the technologies as a tool, but rather the fact that it is only good if the user knows how to use it.

Informatics after grade 7 is no longer taught in elementary school, the teaching is resumed in the 10th grade, but pupils lose their knowledge and skills acquired during two years of teaching. According to the authors, acquired knowledge and skills are strengthened and improved by the process of integration of informatics in study subject Home economics and technologies. Consequently using ICT provides modern teaching and learning process, increases the effectiveness of training, develops students, improving the learning abilities and preparing them for lifelong learning, as well as preparing students for life in today's information society.

Home economics and technologies teacher, who wants to use the computers in the learning process not only for preparation of teaching materials, but also for the students' practical work or evaluation of knowledge, has to take into account pupils' knowledge and skills acquired in informatics lessons. According to the authors view students' knowledge in informatics in grade 5 are small, but pupils of grade 7 have already acquired basic knowledge of computer use and are able to apply this knowledge in other study subjects including Home economics and technologies, if the teacher wishes it.

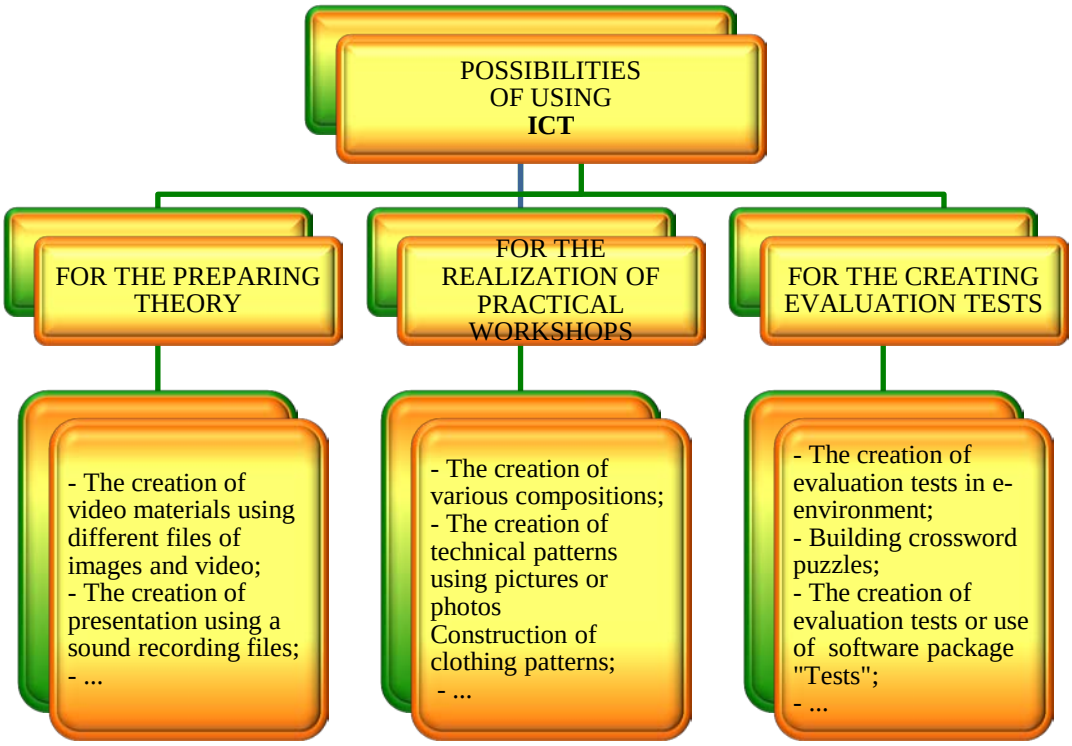

Figure 2. Possibilities of using ICT in study subject Home economics and technologies. (authors'construction)

The authors are convinced about the necessity for development of cross-curricular links, as well as on mutual integration of study subjects, and they see the realization of such opportunity in the study subjects of Home economics and technologies and computer science. Use of digital learning materials gives diversity for lessons and motivates students to work. This way of training involves students with various styles of learning: those who perceive study material better listening; those who like visual aids; those who are good at reading.

Testing on the computer is widely used around the world. As an example authors could mentioned "Brainbench" offers evaluation tests on the internet that allows you to test the knowledge in various fields (Brain bench, 2014).

These tests are for fee and they are more usable for commercial purposes, rather than for the aptitude test in educational establishments. However the author is satisfied for the possibility to download free products from the e-environment which could be used in schools, such as the software package "Tests" (Figure 3):

- the author Peteris Caune, version 1.4, the year of development 2002, the program foreseen for the creation and preparation of training test, filling and testing of knowledge;
- the author Dzintars Rove, the year of development 2003, the program is foreseen for creation of the tests with a special program or with the test editor Notepad and filling in (Mykoob educational..., 2014).

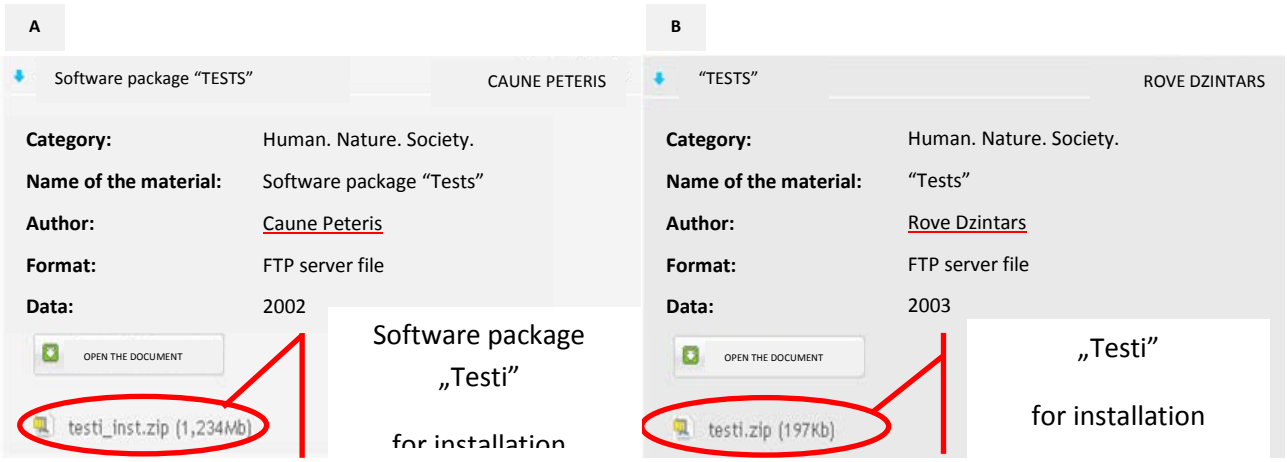

Figure 3. A- software package "Tests", the author P.Caune; B- tests, the author Dz. Rove. (Mykoob educational social network, 2014)

The test preparing program "Tests" is quick and easy. The file for help describes how to create a simple test. In establishing the tests work should be startup by programe "Tests" (Figure 4).

Figure 4. The tools of software package „Tests".

Software package "Tests" does not support animated (moving) GIF images. It is recommended not to use them in your tests, because try to add an animated image will end with a loss of the program. Taking into account the students' age group specifics and the requirements of curriculum standard of study subjects Home economics and technologies and informatics, evaluation tests were designed in textile technologies for grade 8 using the software package "Tests". Tests are in Latvian. Themes of the developed tests are knitting, clothing, sewing and weaving (Figure 5).

Knitting. Knitting nowadays. Knitting pattern technical drawings. Sequence of product fabrication. Knit' formatting and evaporation. Knitting in plane**.**

Clothing and sewing. Fashion, youngsters' style. Accessories. Modeling of basic patters of skirts, divided skirts, trousers. Sewing of skirts and trousers**.**

Weaving. Ways of weved items. Weaving. Auden and celain. Minigobelen.

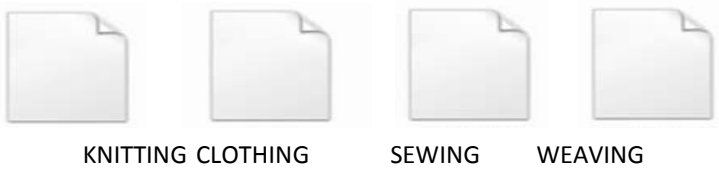

Figure 5. Authors developed and approbated evaluation tests in the textile technologies.

Home economics and technologies teachers use computers mainly for distant communication – E – mail (the sum of average ranking 4.5), to search for information (the sum of average ranking 4.46), E–class (the sum of average ranking 4.13), the development of teaching materials (the sum of average ranking 4.08), thus increasing teachers' personal productivity. The computer is a tool that allows the teacher to execute some already known work more quickly and efficiently, for example: (use of basic software – MS Word, MS Excel and MS PowerPoint) reports, worksheets, tasks and exercises for the electronic creation (Figure 6).

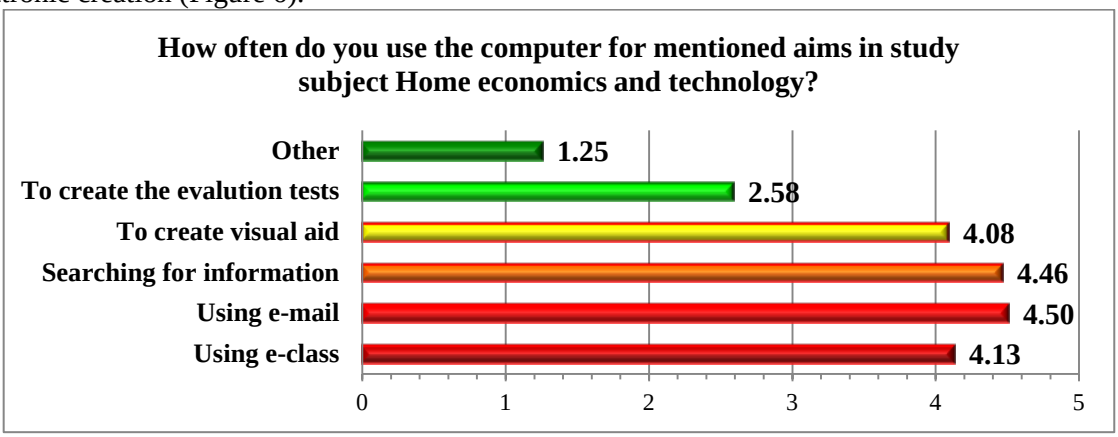

Figure 6. The usage of computer in study subject Home economics and technologies.

Table 1

Respondent' opinion how often do they use the mentioned tools for creation of tests in study subject Home economics and technologies

Friedman coefficient value (Chi – Square) χ_r^2 – 11,846 The significance level of Friedman test (Asymp. Sig.) p – value for both–sided hypothesis 0,037 ≤ 0,05						
	0	**1**	**2**	**3**	**4**	**5**
MS Word (Macros)	6	1	-	-	3	2
MS Excel (Macros)	5	2	-	-	5	-
MS PowerPoint (Macros)	5	1	-	2	3	1
Dz. Rove' software package	12	-	-	-	-	-
P. Caune' software package	6	2	-	2	2	-
Other	9	-	-	1	-	2

Friedman test p–value (0.037) indicates the statistically significant differences between the criterion ratings. *Mean Rank* – average ranking of the sum (R_i / b) differs in graduation classes (Table 1).

The usage of test design tools in study subject Home economics and technologies described in research shows that the evaluation of the criterion of Dz. Rove' developed software package is relatively lower (the sum of average ranking 2.29) than P. Caune' developed software package (the sum of average ranking 3.63) (Figure 7).

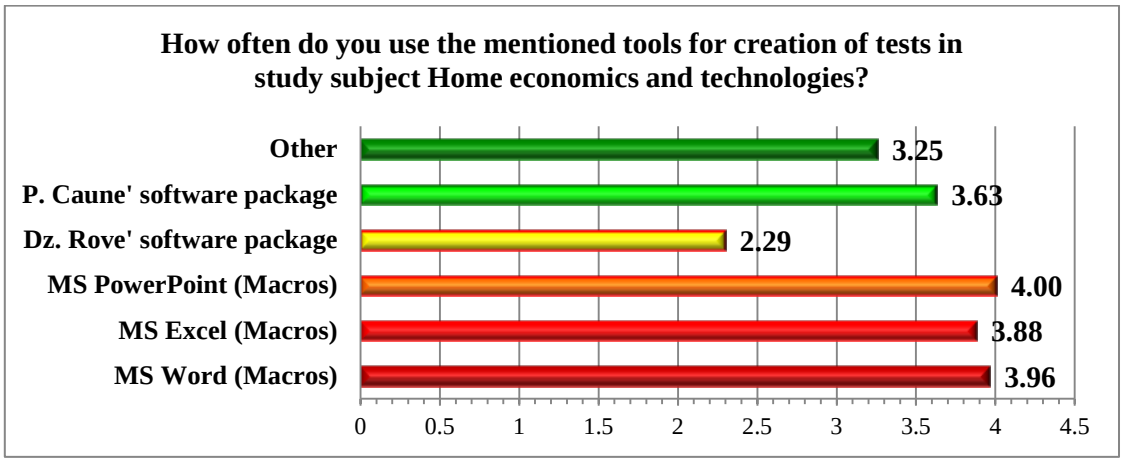

Figure 7. The usage of test design tools in study subject Home economics and technologies.

Table 2

Respondent 'opinion how are they satisfied with the test creation tools for teachers' needs

Friedman coefficient value (Chi - Square) χ_r^2 – 6,4 The significance level of Friedman test (Asymp. Sig.) p – value for both–sided hypothesis 0,171 ≤ 0,05						
	0	**1**	**2**	**3**	**4**	**5**
Possibility of use of password	-	-	-	-	1	11
Possibility to limit run-time	-	-	-	-	-	12
The possibility of using the option for each question separately	-	-	-	1	1	10
Possibility to view the correct responses	-	-	-	-	-	12
The summary of evaluation	-	-	-	-	-	12

Friedman test p–value is 0.171. *Mean Rank* - the sum of average ranking (R_i / b) does not differ significantly in graduation classes (Table 2). The conclusion is that the respondents are satisfied with the capabilities of the test tools and uses all of possibilities: to use of password, to limit run–time, to view the correct responses, to use the summary of evaluation.

If the Home economics and technologies teacher manages to use ICT facilities, she/he can successfully use the computers' benefits in Home economics and technologies lessons on her/him own.

Students acquire the knowledge and skills of managing household and the family in study subject Home economics and technologies. Authors uses the benefits of ICT in school subjects, selecting the topics for whom the use of new technologies would be possible and useful also to meet the standard of elementary education compulsory subject content. Home economics sample program indicates that the content of Home economics and technologies is closely related to other study subjects. It would be necessary that teachers work together and subject content of each class is specified and used in connection with other study subjects. Informatics is one of the study subjects that can be successfully used for Home economics and technologies learning process, taking into account the peculiarities of the age groups of pupils.

The study content emphasizes the importance of students' practical activity – it must be planned at least 75% of the entire learning time allowed. Learning process must be organized so that students are able to independently search and find solutions to practical problems, to formulate and justify the choice of technical solutions and choice, to develop inventiveness and imagination, to cooperate and work as a team, to build a creative operational experience, to see and feel and increase the beauty

around you, to evaluate own and others' work and its results. The authors take into account these conditions when information technologies is used in Home economics and technologies lessons.

In the process of preparation of the new generation for modern social life the authors offers to use information technologies. This way pupils learn several skills: to organize her/his life, to keep her/his surroundings in order, to select and cook a healthy diet, to get to know the material cultural heritage.

Conclusions

- Didactic usability of the information communication technologies (ICT) in Home economics and technologies lessons are the following:
  - for preparing the theory: creation of video material, using a variety of image and video files; creating a presentation using a sound recording files;
  - for implementation of workshops: creation of various compositions; developing technical patterns using pictures or photos; designing clothing patterns;
  - for the development of tests: creating the tests in e–environment; crossword making; using of test design tools.
- The most important issue in any learning process on usage of ICT is to prepare teachers to understand and learn to respect the learners' autonomy, authenticity, learning styles and motivation.
- Doing tests with the computer has the following advantages compared to the traditional testing in writing:
  - all the action takes place with the help of computers, then it is not necessary to copy a worksheet for every student, thus saves expenses for paper;
  - the teacher does not need to fix the student works, because the computer verifies which answers are correct and shows the scores and evaluations;
  - improving the pupil's computer skills;
  - the possibility to use information of multimedia and internet;
  - work with the computer makes the learning process more interesting, because it is different from traditional methods;
  - the student can take the test independently, thus verifying its own competence.
- ICT learning is a crucial factor in the training of youth and also for the development of adult skills. Educator openness to new technologies and willingness to try new programs and communication channels is more important than to be competent in a number of specific programs.
- Preparation of methodological materials and tests requires a knowledge based real execution of operations in a specific order (algorithm) by the given terms, acceptable to students with normal user experience in order to avoid negative psychological stress. Using tests educator must be diversified: prepared, positive, safe, open.
- Using the developed and practically approbated tests in study subject Home economics and technologies with a choice of textile technologies – knitting, clothing, sewing and weaving, using P. Caunes developed software package "Tests", which is foreseen for preparation of teaching test, filling and knowledge assessment, it is possible:
  - to offer more wider opportunities than usual through the tasks on paper, because it is possible to use interactive exercises on computer, which are supplemented with multimedia capabilities (pictures / illustrations);
  - save time, thus allowing more time for practical pupils' work in lessons.
- The study results showed that school teachers of Home economics and technologies used computers – mainly for distant communication - E - mail (average ranking 4.5), to search for information (average rank 4.46), E-class (average rank of 4, 13) the development of teaching materials (average rank 4.08). In addition, P.Caune' test developed software package is used more often than Dz.Roves and they are satisfied with the test tool's creation opportunities offered for the teachers' needs. Friedman test p–value of 0.171, Mean Rank - the sum of average ranking (Ri / b) in graduation classes do not differ significantly.
- As the result of research the authors recommend to use software package "Tests for evaluation and strengthening of students skills " starting from the grade 7, when pupils have acquired basic knowledge of information and communication technologies.

Bibliography

1. Agejevs V. (2005). *Semiotika* (Semiotics). Jumava, Rīga, Latvia, 196 lpp. (in Latvian)
2. Betels Dž. (2003). *Rokasgrāmata pārbaudes darbu veidotājiem* (Handbook for manual test makers). Rīga, Latvia, 84 lpp. (in Latvian)
3. Brain bench the measure of achievement. [online] [19.11.2014]. Available at https://www.brainbench.com/xml/bb/common/testcenter/consumer/testcenter.xml
4. Caune P. (2002). Mācību materiāli. Cilvēks. Daba. Sabiedrība. Programmpakete „Tests". FTP servera fails (Training materials. Human. Nature. Society. Software package Tests). [online] [19.11.2014]. Available at https://www.mykoob.lv/?index/liis_macibu_materiali/post/1 (in Latvian)
5. Cuban L. (1993). Computers Meet Classroom: Classroom Wins. *Teachers College Record* Vol. 95, No.2, p.185–210, [online] [19.11.2014]. Available at http://sdexter.net/xyz/CompMeets%20Classroom.pdf
6. Grundspeņķis J. (2009). *Sistēmu teorijas metodes* (Methods of Systems Theory). The Department of System Theory and design, Riga Technical University, Riga, Latvia**.** (in Latvian)
7. Holmes B., Gardner J. (2006). E-learning: concepts and practice. London, S.
8. *ICT in Initial teacher training* (2009). Finland. Country report. [online] [19.11.2014]. Available at http://www.oecd.org/edu/ceri/45214586.pdf
9. Karnītis E. (2004). Informācijas sabiedrība – Latvijas iespējas un uzdrošināšanās (Information Society - Latvian opportunities and boldness). Pētergailis, Rīga, Latvia, 208 lpp. (in Latvian)
10. Koenraad T. (2008). Interactive Whiteboards in educational practice. ([online] [19.11.2014]. Available at http://www.scribd.com/doc/21254905/Interactive-Whiteboards-in-educational-practice
11. Ķikāns A. (2009). Mācību procesa datorizācijas risinājumi un to izmantošana vispārējās izglītības iestādēs (Solutions of computerization of learning process and its use in mainstream schools). Maģistra darbs (Master Thesis). LLU, Jelgava, Latvia, LLU, 98 lpp. (in Latvian)
12. Līce I. (2012). Change of directions of Home Economics subject. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality* (REEP), Dišlere V. (Ed), Volume 5, LLU, Jelgava, Latvia, pp. 241–248. [online] [19.11.2014]. Available at http://llufb.llu.lv/conference/REEP/2012/REEP-2012-proceedings-E-ISSN-2255-808X.pdf
13. Löfström E., Kanerva K., Tuuttila L., Lehtinen A. & Nevgi A. (2006). Quality teaching in web-based environments: Handbook for university teachers. p.18–19. [online] [19.11.2014]. Available at http://www.helsinki.fi/julkaisut/aineisto/hallinnon_julkaisuja_73_2010.pdf
14. *Mykoob educational social network.* Learning materials. [online] [19.11.2014]. Available at https://www.mykoob.lv/?index/liis_macibu_materiali/category/68/filterby/all/filterfields/
15. Sproģe S. (2007). Mācību process informācijas tehnoloģiju laikmetā (Learning process in the epoch of information technologies). Maģistra darbs (Master Thesis). LLU, Jelgava, Latvia, 80 lpp. (in Latvian)
16. Vronska N. (2012). Topošo skolotāju informācijas un komunikācijas tehnoloģiju integrēšanas prasmju attīstība mājturības un mājsaimniecības izglītībā (Development of prospective teacher information and communication technologies integration skills in household and home economics education). Promocijas darbs (Doctoral Thesis). LLU, Jelgava, Latvia, 163 lpp. (in Latvian)
17. Vronskis O., Vronska N. (2011). USING of information technologies to improve the spatial understanding of students. Proceedings of the VIII International Scientific Conference *Environment. Technology. Resources*. 2.sēj., Rēzeknes Augstskola, Rēzekne, Latvia, pp.55. – 61.
18. Žogla I. (2001). *Didaktikas teorētiskie pamati* (Theoretical foundations of didactics). RaKa, Rīga, Latvia, 275 lpp. (in Latvian)
19. Коджаспирова Г.М. (2004). Педагогика: Учебник для студентов образовательных учреждений среднего профессионального образования (Textbook for students of vocational secondary schools). Владос, Москва, Russia, 352с. (In Russian)

A Critical View to Bauhaus Experiences and the Renovation Quest for Basic Design Education through Samples

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Abstract: While the "Basic Art Education" course, which is also called as "*Visual Thinking*" in Art Education, has been carried out through the adaptations of "Basic School" this understanding today has been questioned and the methods of creativity education has been discussed. Basic principles oriented toward finding solutions to own problems of an art education student, reflecting world view perspectives into his/her productions and struggling for being able to visualize owns thoughts can be renewed in education. Today when global understanding in different disciplines mixing with each other and with universal ones, information of national and regional views has also been needed to discuss and analyse. For that reason any kind of sharing thoughts with instructors in company, who have common sense, are being organized in symposiums for supporting the formation of common perception and development of methods. Finally as an academician member of Suleyman Demirel University of the Faculty of Fine Arts author intend to bring a school of "Reading, Observing and Framing Functions" to arguments of art education in Turkey through the skills and visual samples that author has used to teach in Basic Art Education and Painting classes.

Keywords: basic design, visual, basic art education, painting, Bauhaus school.

Introduction

In this study the necessity for a critical view of visual samples of the students and how Basic Design Education (as theoretically and applied) is lectured has been described. During changing periods theories and cultural structures have given a direction to the present artistic atmosphere and also affected the education of Fine Arts. As for basic design education, it has had some transformations from the understanding of traditional workshop based on master-apprentice relation to Bauhaus and this transformation has still been going on.

Despite the fact that the education models and programmes of our age have benefited from Bauhaus experience, so many thoughts and aspirations such as technology, access to information, university intellect and quality of students have changed since last century to the present day. In art education it is possible to reach with the desire of being able to pass beyond the age and through participant approaches (Artun, Aliçavusoglu, 2011, 418).

Today when global understanding in different disciplines mixing with each other and with universal ones the need for national and regional views' informational flow has been felt as well. So, sharing thoughts with instructors in company, who have common sense, are being organized in symposiums to contribute to the formation of common perception and development of educational methods.

Bauhaus School and Its Design Understanding

Design which transforms into a vital need with Bauhaus thinking and esthetical understanding has come into every field of our lives as a result of the development of mass communication tools and technology. Beyond a school an avant-garde trend and an aesthetic form in the process designed, Bauhaus is a form of comprehension, understanding and interpretation.

It is a written proposal and social renewal on the way of realizing social organizational structure imposed by modernization. It is an educational approach that brings freedom to man in his/her personal experience and inventions and is able to see its own possibilities, scopes and responsibilities by breaking the pattern of traditional way of thinking. Bauhaus was looking for the harmony among art, life styles and indicators. The atmosphere of this quest has been geometry. H.Muthesius in his notice titled "Werkbund Thesis and Antithesis", states that a universally valid, reliable, developed preference could only be possible through standardization. In Foucault's words, Bauhaus is a "discipline technology" and "transformation of aesthetic into a programmed social renovation

movement" (Muthesius, 1914, cited by Artun, 2009). Geometry and initial forms, which is the common language of Bauhaus, narration of cube, square and sphere through contrasts of colour, have occurred in the field of manufacture in a universal solution as a contemporary stylistic language (Erzen, 2009).

However, the logic of standardization does not get along well with artistic productions. In addition, in Bauhaus school where geometry-based rules and principles were formed, author can state that Basic Design Education system designed suitably to the current conditions of those days in most art education institutions has been executed through methods and styles that contradict with today's cultural and artistic structure, visual plastic elements such as colour, style and fiction realized exclusively through surface researches where no scope, space and environment perception have been created and abstraction trials without function and feeling are not found meaningful in the education of creativity anymore. Furthermore, contemporary art education has no goal of mastership and skill.

What is expected today is to develop the self-confidence of an individual who knows what to do and make it possible to know for him by exceeding the limits of sensitivity. Bauhaus's doctrine searching for style perfection through materials which are uncovered, simple and not including ornamental elements in strict discipline and functionalism has pioneered the spread of pronunciation coinciding with the dynamics of interdisciplinary 'modern life'. Concepts and thoughts have preceded the position of architecture, designing and machinery aesthetic in line with the handiness and beauty suggestions (Artun, Aliçavusoglu, 2011, 202).

In this case, it would be true to orient students toward their own aesthetic choices on the focus of creation action instead of conditioning to think with artificialized principles (Figure 1-10). In this structure author should contribute to every student to help them find their positions in a vital reality without forgetting different visual, real development reality. By evaluating transitive options of all artistic areas and sharing thoughts with each other students can shape techniques and methods with his own aspiration.

What Kind of Basic Design Education Should Be?

Basic Design accepted as the basis of visual language is the beginning and purpose of all education and respect to human being in Itten's words. As Kazys Varnelis says that providing a child to teach and learn through his innocent eyes means to see by throwing the weight of the history and the load of daily environmental perceptions away after leaving all prejudices aside (Painter Kazys Varnelis, 2011, cited by Artun, Aliçavusoglu, 2011, 113-119). In this way, author witness that children could create original drawings and styles in their natural liberties surprisingly. Another method to be taken from Bauhaus is that his approaches related to 'Not what but how do teachers teach' and priority of visual thinking. That's why, learning to think through eyes, development of creative sensitivity in company with viewing and visual reading necessitate the formation of background and consciousness. A student should be given opportunities to have a meaning for himself before solving problems and try the solution ways that he could produce after being able to fiction the problem. Students should be guided in their struggles of facing and finding their own egotism in production and should also think of the events and facts through similarity and contrast relations while transferring the objects chosen that participate into visual quality in daily life (Figure 11-30).

They should be encouraged to think, interpret and visualize the social relations and historical information through examining and then comprehend their tendencies. As for the workshops (ateliers), they should be organized in a form to benefit from any kind of material, technical and numerical (electronic) hardware for their artistic anxieties by transforming them into an experimental playground. In a workshop being worked by getting nourished from multidisciplinary areas such as art, photograph, sculpture, textile, video and drama, perceiving the nature of the material and designing in new relations will enrich the students' points of views and provide to reflect their sentimental experiences and things related to life itself. In Bauhaus school, learning style through living based on application suggested by J. Dewey whose education approaches are of effectiveness is a system for a student who is expected to influence his/her environment as well after taking nourishment of the dynamics of the age he/she lives in and developing a sincere narrative language

which is free but away from fictitious styles by combining their thoughts and dreams and supporting to find out his/her own ego (Dewey, 1916/2009, cited by Artun, 2009, 139).

Using Some Environmental and Actual Life Values in Art Education Process

As author believed in the necessity that her students should make experiences by living their inner travels author adopts the understanding 'interdisciplinary art workshop' as method by benefiting from the images created by today's imaging technologies who criticize and interpret their own works by discussing them.

In their creations, author creates possibilities for her students to produce unusual forms out of ordinary objects (waste etc.) where they come across every day in daily life and to try different styles and techniques, visual elements with thinking tendency through materials and concepts on the same plane. In virtual environment where invisibles out of the visible ones and artificial realities intensify as well, author have to come a little in common with traditional methods as a result of the transformation of images and various narrating techniques into the language of art (Figure 31-36).

The individual, who questions the past by observing and shapes his/her age by interpreting the future, considers the social realities at length with a selector logic by interpreting the concepts in a style as related to each other or not and designs his/her own proceeding with a critical view. An art education student should create his/her own thinking universe and environment by seeing and observing and benefiting from all sources and should have the ability to put his daily experiences into recreation with his conscious choices.

Contemporary man in the context of contemporary art education is a person who has information about art history, aesthetic and current art at level being able to interpret them. To be able to make connection between art and life and to quote work of arts can develop not by patterns and rules determined from outside but forming self- methods for an individual who is able to see his/her environment in an aesthetic style with artistic tools. The words 'education through art' has been adopted by all world art trainers (Kehnemuyi, 1995, 18).

Creative education and the question of raising creative individuals necessitate solutions in terms of raising students who can think independently and oriented toward interdisciplinary answers and critical thinking. Not only to look at it, to see, to hear and to touch with hand but to feel the touched thing are the necessary initial steps for creativity (San, 2008, 24-25).

Art education has shown some development and change through useful and effective principles from the individual being nourished with creativity, being worked up in the unity of theory and application and from the cultural variables even to the applying one. As for basic design education as a lecture that includes thinking style of art, it should be performed through contents oriented toward the struggle of visualization of the student's thinking dimension while developing and changing through visual reading consciousness.

Conclusion

Finally individuals, who take art and design education, are in every kind of interaction with their environments. In design education where theoretical and applied ones have been executed together supports this interaction, an educational process and trainers who develops consciousness and hardware to understand, to tell and to apply the design are needed. Cultural and artistic lives take nourishment through this circulation and are supported. In time and space context of thought, author should bear in mind that it has had a transformation during its voyage and taken part in education through different perception and interpretations in separate countries and cultures. In addition to its intellectual and actual contributions that it brought to education and society, Bauhaus has been designed with good intention in its period and designing principles today have been non-functionalized with contents away from its meaning by reducing to simple.

Creations in design lectures should be rendered visible from semantic and intellectual direction with the priority of current conditions instead of creating a formal language and criteria and principles of which have been determined. In the place where the world and our country live the information age,

art environment has also been affected along with the changing socio-cultural facts. It is a reality that art schools cannot exclude themselves from these effects either. In some faculties of Fine Arts, in particular in Turkey, it is necessary that Bauhaus understanding, which is applied in the lecture of Basic Design Education, should be renewed and updated.

Through an interdisciplinary content related to today's production, design styles, thinking structure and materials suggested, it must be created a new construction and an extensive educational method.

Student Works from Suleyman Demirel University - Fine Arts Faculty – Painting Studio

Figure 1 - 2. Complementary Contrast.

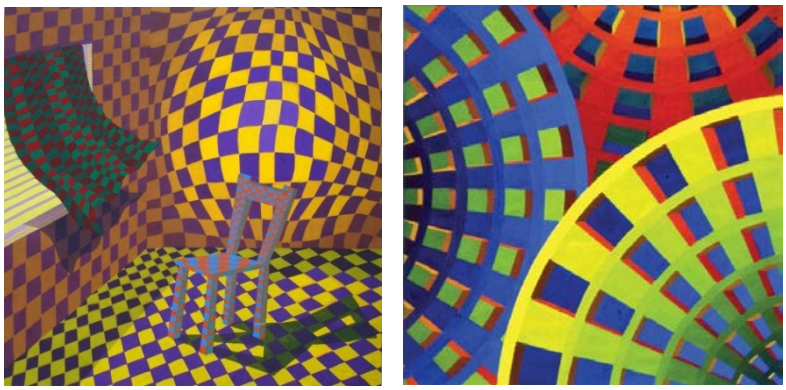

Figure 3 - 4. Complementary Warm & Cool Contrast.

Figure 5 - 6 - 7. Dark & Light Contrast.

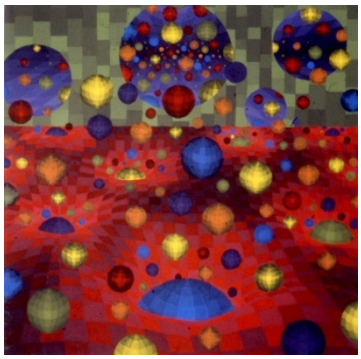

Figure 8. Quality Contrast. Figure 9. Quantity Contrast.

Figure 10 - 11 - 12. Individual Abstractions.

Figure 13 - 14 - 15. Figurative Abstractions.

Figure 16 - 17 - 18. Foreshortening.



Figure 19 - 20 - 21. Foreshortening.

Figure 22. Deindividuation, Melting, Reflection Concept.


Figure 23. Team Work & Workshop Inside Section. Figure 24. Inactivity in Motion.

Figure 25. Interpretation of Miniature Parts.

Figure 26 - 27 - 28 - 29 - 30. The Official Artist, Portraits with Student's Own Re-Interpretation.

Figure 31 - 32 - 33 - 34. Natural-Unnatural Objects Scrap Sculpture (Assemblage).

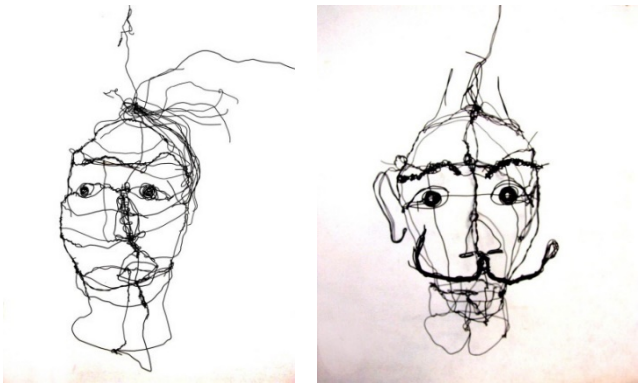

Figure 35 - 36. Three-Dimensional Objects of Wires.

Bibliography

1. Artun A. (2009). *Geometrik Modernlik: Bauhaus Enternasyoneli ve Türkiye'de Sanat.* (Geometric modernity: the Bauhaus Art School in Turkey). [online] [26.11.2014]. Available at http://www.aliartun.com/content/detail/12 (in Turkish).
2. Artun A., Aliçavusoglu E., (2011). *Bauhaus: Modernleşmenin Tasarımı, Sanat Hayat Dizisi* (Bauhaus: modernization Design, art life series). 2. baskı, Iletisim Yayınları, Istanbul. (in Turkish)
3. Dewey J. (1916/2009). Democracy and education: An introduction to the philosophy of education. New York: WLC Books, USA.
4. Erzen J. (2009). *Mimarlık Tarihi – Bauhaus'un 90 Yılında. Mimarlık Dergisi (*90 Years of Bauhaus, Architecture, Middle East Technical University Department of Architecture). No349. [online] [26.11.2014] Available at http://www.mimarlikdergisi.com/index.cfm?sayfa=mimarlik&DergiSayi=363&RecID=2185 (in Turkish)
5. Kehnemuyi Z. (1995). *Çocuğun Görsel Sanat Eğitimi* (Visual Arts Education Children). Yapi Kredi Yayınları, 1.baskı, Istanbul. (in Turkish)
6. Muthesius H. (1914). Werkbund Thesis and Antithesis (German Werkbund exhibition. Art in craft industry and trade architecture, Coln 1914). [online] [26.11.2014] Available at https://designosopher.wordpress.com/2013/08/14/werkbund-thesis-and-antithesis/
7. Painter Kazys Varnelis. National Museum of Lithuania. [online] [05.01.2011]. Available at http://www.lnm.lt/en/exposition-locations/kazys-varnelis-house-museum/painter-kazys-varnelis
8. San İ. (2008). *Sanat Eğitimi (*Arts Education). 4. baskı, Utopya Yayınevi, Ankara. (in Turkish)

Impact of Nutritional Knowledge on Eating Whole Meal Bread

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Abstract: Regular consumption of dietary fibre helps in maintaining health. It is an important tool in prevention of overweight, obesity, hypertension, gastrointestinal cancer etc. Nowadays average daily intake of fibre in many population groups is too low in relation to nutritional recommendations. One of the reasons of too small dietary fibre intake is the insufficient amount of wholemeal products in the diet. Too low intake of whole grains as a good source of fibre may appear due to the lack of nutritional knowledge. The objective of the study is to determine the relationships between nutritional knowledge and the frequency of eating of whole meal bread. The questionnaire survey was carried out in March 2013 among 1013 Poles representing national wide sample. The frequency of eating wholemeal bread, general nutritional knowledge, and knowledge about fibre were measured. The higher was general nutritional knowledge of respondents the more they knew about fibre. Nutritional knowledge determined significantly the frequency of wholemeal bread eating but the correlation was negative and week (r=-0.104, *P*=0.01). The higher was nutritional knowledge, the more seldom they ate wholemeal bread. Similar relationship was achieved in the case of knowledge on fibre (r=-0.161, *P*=0.01). It can be concluded that strategies focused on increasing whole meal bread consumption cannot be limited to the transmission of nutritional knowledge, even specific knowledge on fibre. The other factors should be taken into consideration.

Key words: fibre, bread, nutritional knowledge, health.

Introduction

Average daily intake of dietary fibre in many population groups is too low in relation to nutritional recommendations (King, Mainous, 2012). One of the reasons of small dietary fibre intake is the insufficient amount of wholemeal products in the diet (Lang, Jebb, 2003; Seal, Jones, 2006), resulting from changing eating patterns and increasing number of substitutes (Siega-Riz, Popkin, 2000). Another reason why dietary fibre is not consumed in sufficient amounts may be the fact that products rich in it are considered not tasty (Baixauli, Salvador, 2008). The other factors that are perceived to have adverse effect on this phenomenon are: higher price of wholemeal products in comparison to their refined equivalents, low availability of cereal products that are a good source of fibre and the fact that these products do not meet expectations of consumers (Adams, Engström, 2000).

The more consumers know about food, the more likely they are to undertake nutritional behaviours beneficial for their health. Some research indicate this relation (Barzegari, Ebrahimi, 2011), although in some studies it was not confirmed (Lin, Yang, 2007). As knowledge about food and health is seen as an important determinant of food choice (Sun, 2008; Arvola, Lähteenmäki, 2007), it should be seen as an important factor when a choice of bread is made. The results of some studies have shown that consumers have high knowledge about dietary fibre (Cashel, Crawford, 2001; Lyly, Soini, 2004). They suggest that most of consumers is able to link fibre intake to its beneficial effects on health (Mialon, Clark, 2002), and recognize products which are good sources of fibre (Cashel, Crawford, 2001; Lyly, Soini, 2004). It is a little known about the relations between nutritional knowledge of consumers and their bread choices. Moreover, in Polish population the impact of knowledge about fibre on wholemeal bread eating was not investigated up to now. Thus, the aim of the study is to determine the relationships among nutritional knowledge, knowledge about fibre and the frequency of eating of whole meal bread within Polish consumers.

Methodology

The data reported in this study is a part of a project on Polish consumers' behaviours on the bread market and their determinants. Selection criteria of the sample took into account the representativeness

of the Polish population due to the province, and then the choice had quota character by gender, education and size of residence place.

The questionnaire was completed by 1013 consumers. The data was collected in March 2013 by a marketing agency. The participants were over 21 years old and were solely or jointly responsible for the family's grocery shopping. A pre-test of the initial instrument used a pilot study (n=50) within the population of interest.

In the questionnaire the frequency of eating wholemeal bread was measured on a 6-point scale, where 1 – once a month or seldom, 2 – once a fortnight, 3 – once a week, 4 – 2-3 times a week, 5 – 4-5 times a week, 6 -once a day or more.

Nutritional Knowledge Scale (NKS) developed by the Commission of Behavioural Determinants of Nutrition from Polish Academy of Sciences was used to assess the participants' nutritional knowledge (Table 1). The task of the respondent was to give opinion on each of the statements choosing one of the three following options: 1 – I do not agree, 2 – I agree, 3 – I do not know. Next, the data were recorded due to the correctness of respondent's answer (1 - correct answers, 2 - incorrect answers and 3 - I do not know. When the nutritional knowledge of the respondents was assessed, correct answers were assigned to value 1, and others to value 0. The sum of scores of all items of NKS for each participant was calculated. The higher was the score, the higher was the nutritional knowledge of the respondent.

Consumers' knowledge about fibre was measured with 3 items: "Fibre helps to maintain proper level of blood cholesterol", "Fibre satisfies the sensation of hunger", and "Fibre accelerates the movement of digested through intestines". The agreement with the statements were marked on a 5-point scales anchored (1) strongly disagree to (5) strongly agree. The sum of scores of three items for each participant was calculated.

Consumers' perception of wholemeal bread as a good source of fibre was measured with one item "Wholemeal bread is a good source of fibre". The need to control the amount of fibre in the diet was expressed by the statements "One should control the amount of fibre consumed". The agreement with both statements were marked on a 5-point scales anchored (1) strongly disagree to (5) strongly agree.

For statistical analysis IBM Statistics SPSS 21.0 software was used. Cronbach's alphas were calculated to determine the internal consistency of scales regarding the measures of nutritional knowledge and knowledge about fibre. Relationships between different parameters were assessed by calculating Pearson correlation coefficients. A *P*-value of <0.05 was taken as significant.

The range of possible score for the NKS is 0-26 points, with higher scores indicating higher knowledge. The sum of scores of all items of NKS for each participants, and next the mean score of sum (X) and standard deviation (SD) for the sample were calculated. The measure of NKS for the sample had a mean value of 11.01 (SD=4.43; range 0-22). They were used to determine the ranges for four levels of nutritional knowledge. The low level (minimum sum – X-SD) was in the range 0- 6.58 (14.5% of population), the below average one (X-SD – X) was in range 6.59 – 11.01 (39.1%), the average one (X – X+SD) was in range 11.02 – 15.04 (30.1%), and the high level (X+SD – maximum sum) was in range 15.05 – 22 (16.3%). The same way was used to determine the level of knowledge about fibre. The range of possible score for knowledge about fibre is 3-15, with higher scores indicating higher knowledge. The measure for the sample had a mean value of 10.79 (SD = 2.53). The low level was in the range 3.00 – 8.26 (19.2 of population), the below average one was in range 8.27 – 10.79 (27.3%), the average one was in range 10.80 – 13.32 (35.5%), and the high level was in range 13.33 – 15.00 (18.0% of population).

Results and discussions

The sample had a higher proportion of women (53.4%). The average age was 47.6, standard deviation 4.43. There were 35.5% respondents with education lower than secondary, 36.5% with secondary education, and 27.9% with high education. The percentages of those living in rural areas were 38.4%, whereas 61.6% of participants were living in urban areas.

The correct opinions on each statement from Nutritional Knowledge Scale are presented in Table 1. Alpha coefficient for NKS was 0.79 showing good internal reliability of the scale.

Most of correct opinions related to higher fiber content in whole meal bread than refined one, drinking milk only by children and young people, consumption of fruits and/or vegetables in every meal, limiting fatty foods as a protection against cardiovascular disease, and the presence of beneficial intestinal bacteria in bio yogurts. Only slightly more than 10% of the respondents presented correct opinions on protein as main source of energy in the proper diet, and high nutritional density of sweets and animal fats (Table 1).

Table 1

Respondents' opinions on items from Nutritional Knowledge Scale – NKS (%)

Items from Nutritional Knowledge Scale	Correct answers	
	N	%
It is enough to consume cereal products once a day	348	34.4
Only children and youth should drink milk	638	**63.0**
Fruits and/or vegetables should be consumed in every meal (R)	631	**62.3**
Ingestion of mouldy bread can cause an infection with Salmonella (R)	544	53.7
High salt intake protects against hypertension	483	47.7
Limiting fatty foods in the diet helps to prevent cardiovascular disease (R)	623	**61.5**
Frequent consumption of oily fish accelerates the development of atherosclerosis	341	33.7
Eating grilled meat is conducive to falling ill with cancer (R)	422	41.7
The consequence of a vegetarian diet is an increased risk of anaemia (R)	473	46.7
Bio yogurts contain beneficial intestinal bacteria (R)	636	**62.8**
Oil and olive oil contain a lot of cholesterol	260	25.7
Wholemeal bread contains more fibre than refined bread (R)	728	**71.9**
Fruits and vegetables are a source of "empty calories"	561	55.4
Butter and fortified margarine are characterized by a high content of vitamins A and D (R)	550	54.3
Cheese is a better source of calcium than cottage cheese (R)	302	29.8
The giblets contain significant amounts of "bad" LDL cholesterol (R)	352	34.7
Complex carbohydrates in diet should be replaced by monosaccharide	188	18.5
Protein should be the main source of energy in the proper diet	119	11.7
Inadequate intake of niacin can cause dermatitis and diarrhoea (R)	383	37.8
Exposure to the sun promotes the production of vitamin D in the body (R)	583	57.6
Phosphorus is a component of the nervous tissue (R)	299	29.5
Calcium to phosphorus ratio in the diet should be 1:1 (R)	304	30.0
Eating fruit rich in vitamin C enhances iron absorption (R)	547	54.0
Start cooking the vegetables in cold water favours maintaining their nutritional value	248	24.5
Sweets and animal fats are characterized by high nutritional density	116	11.5
GDA figure placed on food packaging indicates the degree of coverage guideline daily nutrient intake by a portion of the product (R)	477	47.1

(R) – item requiring reverse scoring to the original questionnaire (score 1 was converted into score 2 and score 2 was converted into score 1)

Opinions on dietary fibre and its impact on health are presented in Table 2. The alpha coefficient for consumers' knowledge about dietary fibre (0,890) has shown good internal reliability of the scale. More than 50% of participants agreed that fibre helps to maintain proper level of blood cholesterol and

accelerates the movement of digested through intestines, and wholemeal bread is a good source of fibre (Table 2). These results are confirmed in other studies (Cashel, Crawford, 2001; Lyly, Soini, 2004).

The frequency of consuming wholemeal bread was differentiated in the study population. Once a month or less this product was consumed by 12.3% of population, once a fortnight by 18.5%, once a week by 20.9%, 2-3 times a week by 21.6%, 4-5 times a week by 18.5%, and once a day or more by 8.2% of participants.

Previous research suggested that demographic variables, such as gender, age and education, were statistically associated with nutritional behaviours (Ares, Gambaro, 2007; Hearty, McCarthy, 2007). Also the nutritional knowledge, attitudes towards food products and nutritional behaviours showed differences after taking into account socio-demographic characteristics of the study populations (Jezewska-Zychowicz, Jeznach, 2013). In this study women were characterized by significantly higher nutritional knowledge, and knowledge about dietary fibre compared to men. Women agreed to a greater extent with opinion that whole meal bread is a good source of dietary fibre and they consumed whole meal bread more frequently than men. The differences between men and women regarding their knowledge of nutrition, as well as nutritional behaviours were reported in several studies (Dean, Raats, 2007; Hoefkens, Valli, 2012), which is mainly explained by greater involvement of women in family feeding and attaching greater importance to the appearance by women (Wronka, Suliga, 2013).

Participants aged 30 years and younger represented significantly higher knowledge about dietary fibre than those aged over 60 years (Table 3).

Table 2

Respondents' opinions on fibre (mean value, standard deviation, %)

Items	Mean	SD	Respondents' opinions (%)				
			1*	2	3	4	5
Fibre helps to maintain proper level of blood cholesterol	3.49	1.07	4.3	12.5	32.1	31.8	19.2
Fibre satisfies the sensation of hunger	3.52	1.02	1.6	13.6	37.2	26.7	20.9
Fibre accelerates the movement of digested through intestines	3.78	0.99	0.6	10.0	29.2	31.0	29.2
Wholemeal bread is a good source of fibre	3.82	0.99	0.4	9.0	30.3	29.3	31.0
One should control the amount of fibre consumed	3.30	1.07	5.4	16.1	36.4	27.2	14.8

*1- strongly disagree, 2 - rather disagree, 3 - neither agree nor disagree, 4 - rather agree, 5 - strongly agree Nutritional knowledge of people aged over 60 years was significantly lower than those aged 31-40 years, as well as others, but in the case of the latter, the differences were not statistically significant. Participants aged 50 years and less agreed to a greater extent with the opinion that whole meal bread is a good source of fibre than people aged over 60 years. No statistically significant differences were observed in the frequency of consumption of whole meal bread after taking into account the age of the respondents (Table 3).

Participants with higher education represented a significantly greater knowledge about dietary fibre than the others. With the increase in education increased mean value of an opinion on whole meal bread as a good source of fibre. Whole meal bread was eaten less frequently by people with secondary education. There were no significant differences in the average frequency of consumption of this bread by people with higher education and those with education lower than secondary one.

Participants who lived in large cities characterized by the greatest knowledge of whole meal bread as a source of fibre, while residents of small towns represented the smallest knowledge. Respondents from small towns represented lower nutrition knowledge, lower frequency of eating whole meal bread and lower control over the amount of fibre intake compared with others. There were no significant differences of opinions on these issues between residents of the villages and the large cities (Table 3).

Table 3

Respondents' profile according to opinions on fibre related issues, nutritional knowledge, frequency of wholemeal bread eating and socio-demographic characteristics (mean value; standard deviation)

	Variables				
	Knowledge about fibre	**Wholemeal bread as a source of fibre**	**Control of fibre consumed**	**Nutritional knowledge**	**Frequency of wholemeal bread eating**
Total	10.79; 2.53	3.82; 0.99	3.30; 1.07	11.01; 4.35	3.59; 1.50
Gender					
Female	11.07[a]; 2.52	3.88[a]; 0.98	3.34;1.12	11.29[a]; 4.51	3.68[a]; 1.45
Male	10.47[b];2.52	3.73[b]; 0.98	3.25; 1.02	10.70[b]; 4.13	3.48[b]; 1.55
Age					
30 years old and less	11.01[a]; 2.55	3.92[a]; 0.97	3.42;1.10	11.34; 4.43	3.63; 1.47
31-40 years old	11.03; 2.42	3.97[a]; 0.92	3.39; 1.05	11.46[a]; 4.51	3.55; 1.53
41-50 years old	11.01; 2.41	3.89[a]; 0.98	3.35; 1.03	11.20; 3.93	3.72; 1.41
51-60 years old	10.51; 2.44	3.76; 1.01	3.17; 1.11	11.04;3.91	3.51; 1.47
More than 60 years old	10.44[b]; 2.67	3.62[b]; 1.01	3.21; 1.06	10.31[b]; 4.65	3.56; 1.58
Education					
Lower than secondary	10.37[a]; 2.43	3.59[a]; 0.99	3.21; 0.99	9.68; 4.26	3.65[a]; 1.57
Secondary	10.80[a]; 2.55	3.86[b]; 0.97	3.32; 1.06	10.90; 4.04	3.49[b]; 1.42
High	11.29[b]; 2.55	4.04[c]; 0.94	3.39; 1.17	12.85; 4.20	3.63[a]; 1.51
Place of residence					
Rural area	10.86; 2.51	3.81[a]; 0.98	3,37[a]; 1.02	10.92[a]; 4.45	3.49[a]; 1.57
Small town	10.66; 2.50	3.59[b]; 0.94	2.96[b]; 1.14	10.14[b]; 4.49	3.90[b]; 1.59
Large city	10.84; 2.59	4.03[c]; 0.99	3.54[a]; 0.99	11.97[a]; 3.88	3.41[a]; 1.27

Knowledge about dietary fibre significantly correlated with other variables with different strength. The strongest association was found with the opinion of whole meal bread as a source of fibre. Only the relationship between knowledge about dietary fibre and frequency of consumption of whole meal bread was negative. Negative correlations with the frequency of whole meal bread consumption were also demonstrated for the opinions of whole meal bread as a source of fibre and nutrition knowledge. All negative relationships were weak. However, there was no significant relationship between the frequency of consumption of whole meal bread and the opinion on control over the consumption of fibre (Table 4).

Table 4

Bilateral correlations of variables

Variables	**No**	**Variables (No)**				
		1	**2**	**3**	**4**	**5**
Knowledge about fibre	1	1	0.697**	0.443**	0.275**	-0.161**
Wholemeal bread as a source of fibre	2	0.697**	1	0.461**	0.281*	-0.173**
Control of fibre consumed	3	0.443**	0.461**	1	0.074*	-0.037
Nutritional knowledge (NKS)	4	0.275**	0.281**	0.074*	1	-0.104**
Frequency of wholemeal bread eating	5	-0.161**	-0.173**	-0.037	-0.104**	1

*correlation is significant at P=0.05

**correlation is significant at P=0.01

Statistically significant negative correlation between nutritional knowledge, as well as knowledge about fibre, and consumption of whole meal bread requires discussion. Most of the previous studies showed that with increasing nutritional awareness increased consumers' interest in healthy food and healthy nutritional behaviours (Dean, Raats, 2007), which should include eating wholemeal bread. Lack of confirmation of these results indicates the need to look for other factors determining to a greater extent this behaviour. It appears that some qualities of wholemeal bread, as the lower scores of sensory attributes of wholemeal bread compared with white bread (Baixauli, Salvador, 2008), the higher price of wholemeal bread (Kuznesof, Brownlee, 2012), as well as its low availability (Arvola, Lähteenmäki, 2007) can reduce consumption of whole meal bread. Thus, they can foster the inverse relationship between knowledge and frequency of whole meal eating.

The smallest number of people with nutritional knowledge defined as the average and high consumed whole meal bread with a frequency of once a day or more often, as well as 4-5 times a week, which confirms the negative correlation between nutritional knowledge and frequency of consumption of whole meal bread. Similarly, fewer people with average and high knowledge about dietary fibre consumed once a day or more often whole meal bread, also 4-5 times a week (Table 5).

Table 5

Frequency of whole meal bread eating according to nutritional knowledge and knowledge about fibre level (%)

Items	Frequency of whole meal bread eating			
	Less than once a week	2-3 times a week	4-5 times per week	Once a day or more
Total (N = 1013)	22.3	42.2	21.0	14.5
Nutritional knowledge level (P<0.001)				
Low (N = 147)	25.2	39.5	21.0	14.3
Below average (N =396)	17.9	33.6	26.5	22.0
Average(N = 305)	25.9	48.9	16.7	8.5
High (N = 165)	23.6	52.7	15.8	7.9
Knowledge about fibre (P<0.001)				
Low (N = 194)	19.6	38.1	26.3	16.0
Below average (N = 277)	18.4	35.4	27.1	19.1
Average (N = 360)	21.7	45.3	18.8	14.2
High (N = 182)	32.4	50.6	10.4	6.6

Conclusions

- The higher was nutritional knowledge and knowledge on fibre, the more seldom the participants ate wholemeal bread.
- The nutrition education needs to include beside general nutritional information, specific knowledge referring to food products.
- In future studies there are a need to search for other factors strongly determined consumption of whole meal bread and products rich in dietary fibre. Nevertheless, the complex factors limiting the consumption of whole meal bread should be taken into account. It will then be able to know their individual significance when selecting a product, and the interaction between them.

Funding

This work was performed within the Project No POIG.01.03.01-14-041/12 "Bioproducts", innovative technologies of pro-health bakery products and pasta with reduced caloric value co-financed by the European Regional Development Fund under the Innovative Economy Operational Programme 2007–2013.

Bibliography

1. Adams J.F., Engström A. (2000). Dietary intake of whole grain vs. recommendations. *Cereal Food World*, Vol. 45, No.2, pp. 75-78.
2. Ares G., Gámbaro A. (2007). Influence of gender, age and motives underlying food choice on perceived healthiness and willingness to try functional foods. *Appetite*, No. 49, pp. 148-158.
3. Arvola A., Lähteenmäki L., Dean M., Vassallo M., Winkelmann M., Claupein E., Saba A., Shepherd R. (2007). Consumers' beliefs about whole and refined grain products in the UK, Italy and Finland. Journal of Cereal Science, No. 46, pp. 197-206.
4. Baixauli R., Salvador A., Hough G., Fiszman S. M. (2008). How information about fibre (traditional and resistant starch) influences consumer acceptance of muffins. Food Quality and Preference, Vol. 19, No. 7, pp. 628-635.
5. Barzegari A., Ebrahimi M., Azizi M., Ranjbar K. (2011). A study of nutrition knowledge, attitudes and food habits of college students. World Applied Science Journal, Vol. 15, No. 7, pp. 1012-1017.
6. Cashel K.M., Crawford D., Deakin V., Talbot B. (2001). Is the link between nutrients and food understood? The case of fibre and foliate. Public of Health Nutrition, No. 4, pp. 913-918.
7. Dean M., Raats M.M., Shepherd R., Arvola A., Lähteenmäki L., Saba A. (2007). Consumer perceptions and expectations for healthy cereal products. Journal of Cereal Science, No. 46, pp. 188-196.
8. Hearty A.P., McCarthy S.N., Kearney J.M., Gibney M.J. (2007). Relationship between attitudes towards healthy eating and dietary behaviour, lifestyle and demographic factors in a representative sample of Irish adults. Appetite, No. 48, pp. 1-11.
9. Hoefkens C., Valli V., Mazzocchi M.,Traill W.B., Verbeke W. (2013). European consumers' perceived seriousness of their eating habits relative to other personal health risks. *Preventive Medicine*, No. 57. pp. 618-622.
10. Jeżewska-Zychowicz M., Jeznach M., Kosicka-Gębska M. (2013). Consumers' interests in sweets with health-promoting properties and their selected determinants. Polish Journal of Food and Nutrition Sciences, Vol. 63, No. 1, pp. 43-48.
11. King D.E., Mainous III A.G., Lambourne C.A. (2012). Trends in dietary fibre intake in the United States, 1999-2008. Journal of the Academy of Nutrition and Dietetics, Vol. 112, No. 5, pp. 642–648.
12. Kuznesof S., Brownlee I.A., Moore C., Richardson D.P., Jebb S.A., Seal C.L. (2012). Whole heart study participant acceptance of wholegrain foods. Appetite, No. 59, pp. 187-193.
13. Lang R., Jebb S. (2003). Who consumes whole grains, and how much? Proceedings of Nutrition Society, No. 62, pp. 123-127.
14. Lin W., Yang H., Hang C-M. Pan W-H. (2007). Nutrition knowledge, attitude, and behavior of Taiwanese elementary school children. Asia Pacific Journal of Clinical Nutrition, No. 16(S2), pp. 534-546.
15. Lyly M., Soini K., Rauramo U., Lähteenmäki L. (2004). Perceived role of fibre in a healthy diet among Finnish consumers. Journal of Human Nutrition and Dietetics, No. 17, pp. 231-239.
16. Mialon V.S., Clark M.R., Leppard P.I., Cox D.N. (2002). The effect of dietary fibre information on consumer responses to breads and ''English" muffins: A cross-cultural study. Food Quality and Preference, Vol. 13, No. 1, pp. 1-12.
17. Seal C.J., Jones A.R., Whitney A.D. (2006). Whole grains uncovered. Nutrition Bulletin, No. 31, pp.129-137.
18. Siega-Riz A.M., Popkin B.M., Carson T. (2000). Differences in food patterns at breakfast by socio demographic characteristics among a nationally representative sample of adults in the United States. Preventive Medicine, Vol. 30, No. 5, pp. 415-424.
19. Sun Y-H. (2008). Health concern, food choice motives, and attitudes toward healthy eating: The mediating role of food choice motives. Appetite, Vol. 51, No. 1, pp. 42-49.
20. Wronka I., Suliga E., Pawlińska-Chmara R. (2013). Perceived and desired body weight among female university students in relations to BMI-based weight status and socio-economic factors. Annals of Agriculture and Environmental Medicine, Vol. 20, No. 3, pp. 533-538.

The Real Estate Market Development Impact on Life Quality - Main Aspects Tendencies and Important Regulations

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Abstract: Improvement of the quality of life is one of the main economic policy tasks in many countries. The research topicality is being determined by the fact that quality of life and real estate are interrelated parameters and are essentially interdependent. The *aim of the research* is to identify the key socio-economic aspects of the quality of life and the real estate, with a view to provide scientific and practical recommendations for improvement of the quality of life. The research is focused on Latvia. The study provides the analysis of the number of scientific literature, scientific articles and statistical databases. Quantitative research methods, comparison method and statistical analysis methods have been used in the study. Demand for real estate is affected by environmental development, as well as significantly associated with quality of life, so the research issue has been approached in an integrated manner. The results of the study underline the importance of the connection of quality of life and real estate in both short and longer term. The real estate market should solve a number of related sustainable development issues. The study results and recommendations can be applied to the industry regulation and planning of the improvement of the overall quality of life.

Keywords: adult life quality, real estate market, sustainability, regulation, environment.

Introduction

Real estate in its social role is a reflection of the quality of life, as well as a tool for improvement of this quality of life - and this can be applied to all segments of the real estate, residential areas, potential improvements, it is also affected by the construction and the surrounding environment development trends in general and many other aspects. Quality of life and real estate are interrelated parameters and are essentially interdependent. One of the main economic policy tasks in many countries is improvement of the quality of life. As was researched (Beslerová, Dzuričková, 2014), quality of life is a very complex concept. Important are also market affordability indexes, because they show combination of such factors as average salary, down payments and interest rates, depending on housing affordability index calculation methodology. Increasing evidence of a direct association between unaffordable housing and poor mental health, as the effects of general financial hardship, can be observed (Mason, Baker, 2013).The environment quality highlights a role of the real estate price, accessibility and other local land-use variables (Chiarazzo, Caggiani, 2014).

It is proved, that house price dynamics are a local phenomenon, and there are important economic differences among cities, and also in cities where housing supply is quite inelastic, prices will be higher comparing to rents, and house prices usually are more sensitive to changes in interest rates (Himmelberg, Mayer, 2005). At the same time, price is one the most important factors in process of choosing real estate by households and business representatives. For defining real estate value, for example such evidences are also important - proximity to fast public transit, clean air, high-quality schools, major universities, and environmental amenities are as well capitalized into real estate prices (Zheng, Kahn, 2008).

Methodology

The study provides the analysis of the number of scientific literature, scientific articles and statistical databases. Quantitative research methods, comparison method and statistical analysis methods have been used in the study. Demand for real estate is affected by environmental development, as well as significantly associated with quality of life, so the research issue has been approached in an integrated manner. The practical part of research is focused on Latvia.

Theoretical aspect overview

The importance of real estate market regulations is associated with a fact, that land-property markets should take on modified forms of governance, they are not "free" markets that work as prescribed by classic economics (Alexander, 2014). At the same time there is a significant positive correlation between urban real estate prices and urban economic openness (Wang, Yang, 2011).
In context of sustainable investment environment there are such important aspects of enhancement of sustainable competitiveness (Vanags, Butane, 2013, 1225):

- economic growth,
- social cohesion,
- employment,
- competitive power in international competition,
- using resources in an efficient and sustainable way,
- minimizing negative environmental impacts.

Significant is to define a manner by which the enterprise is delivering value to customers, that entices customers to pay for value, as converts these payments to profit (Teece, 2010). At the same time, higher self-reported quality of life has better educated, brighter, higher social class people (Cheng, Green, 2014). The outstanding quality and durability of buildings that is delivered to the owner or occupier will lead to a better quality of living and to a better quality of life (Musa, Mohammad, 2014). Buyers pay a significant premium for good workmanship quality and well constructed real estate in the beginning appreciate at a significantly higher rate than prices for average quality house (Ooi, Le, 2014). For evaluation of sustainability of dwelling renovation, such factors can be taken into account – performance, economic factors, usability and social factors (Risholt, Time, 2013). Commercial real estate leases tend to be longer in developed economies, common law legal systems and also in countries with less corruption (Titman, Twite, 2013). There is a difference between income expectations from long-run, sustainable sources of employment and the primarily speculative expectations of profit from subjective values within one real estate market (Lejano, Stokols, 2013).

Great importance in life quality, as well in real estate market development, has a sustainability topics. In Israel in recent decades the high rate of population growth, coupled with rapid economic development and limited space and natural resources, has generated great pressure on already scarce land and water resources (Gal, Hadas, 2013). The movement toward environmental sustainability is one of the largest cross-disciplinary trend of the last few decades, including real estate discipline (Krause, Bitter, 2009). Sustainability indicators function groups pointed out by W.R. Blackburn in Table 1.

Table 1

Sustainability indicators functional groups (Blackburn, 2007, 192)

• Business development (mergers and acquisitions) • Business planning • Charitable giving; Foundation • Communications; Public relations; Community relations • Corporate governance; Corporate secretary • EHS (Environment, health and safety) • Ethics; Business practices • Facilities engineering; Energy management • Finance • Government affairs; Public policy	• Human resources; Employee relations • Information Technology (IT) • Internal Audit • Investor Relations • Law • Manufacturing • Quality • Research and Development; Product Design) • Risk Management • Sales and Marketing; Distribution • Security • Supply Chain (Supplier Management; Purchasing)

One of incisive sustainability valuation tools is The Energy Performance Certificate, but it has some problems regarding energy performance evaluation, especially about independent expert practices, but the energy classification range is correct to reduce the effects of value fluctuation (Fabbri, Tronchin, 2011). The value of real estate consists from the set of factors. Important to mention, that

understanding of the price and trading patterns in the housing market also have important welfare and business-cycle implications (Edelstein, Qian, 2011). The life cycle model of consumption implies conviction that real estate appreciation may be associated with higher wealth, triggering higher consumption, in such way increasing the current account deficit (Aizenman, Jinjarak, 2009).

Also property tax expenses indicate higher costs for housing capital that is followed by lower demand and lower price for housing capital (Bischoff, 2012). Fiscal sustainability is one of the factors, that is affecting real estate market and life quality, so special attention should be paid to fiscal policy regulation. To archive fiscal sustainability, following conditions have to be fulfilled (Morais, Aragao, 2014, 424):

a) the programs are to be internally solvent and liquid;
b) the program shall not deteriorate the overall fiscal balance; especially, the additional public debt caused by the program shall comply with the set rules and control indicators for the whole public debt;
c) the fiscal management within the program shall ensure robustness with respect to different vulnerabilities as fluctuation of the interest, exchange and growth rates, distortive behavior regarding tax evasion, investment, consummation, savings and other risk phenomena to be detected;

Housing affordability is one of the most important indicators, that also can characterise the country, in which research are being made. The most unaffordable housing in 2013 was in Hong Kong, that breaked all the records, the follows New Zealand and Australia (10th Annual International Housing Affordability Survey, 2014). On example of China, it is suggested to improve affordability of housing for local people, because according to calculations average citizen in Beijing has to work for 39 years continuously (without any other additional expenses) to buy one hundred square meter real estate (Xie, Yu, 2011). Calculations revealed that by all groups of criteria, the most sustainable housing market is in Denmark, closely followed by Germany and Sweden, and criteria which most influence the housing affordability, is insufficient government expenditure for housing and community amendments in the Baltic States, Spain, Finland, Sweden, Denmark and UK – for evaluation housing market sustainability in each of the selected countries was analyzed in six criteria groups - general economic, housing stock, housing affordability, population and social conditions, housing quality and environmental quality (Nuuter, Lill, 2015).

Practical part

Life quality influence variety of macroeconomic indicators, and real estate market development tendencies as well.

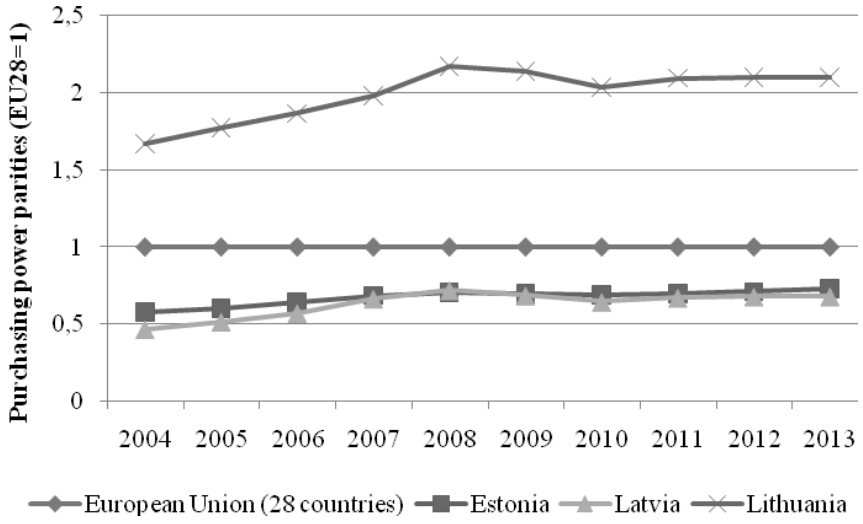

Figure 1. Purchasing power parities (EU28=1) Data: Eurostat. figure made by authors.

Purchasing power parities scaled to the sum of expenditures of the EU Member States expressed in euro, purchasing parities shows how many units of national currency one would need in that country in order to maintain the purchasing power of one euro in the EU (Eurostat metadata, 2014). Purchasing parities of Baltic States (EU28=1), are observed in Figure 1.

Purchasing parities in Latvia in construction branch are observed in Figure 2, and the highest rate is especially for civil construction activities, lower rating – for residential buildings.

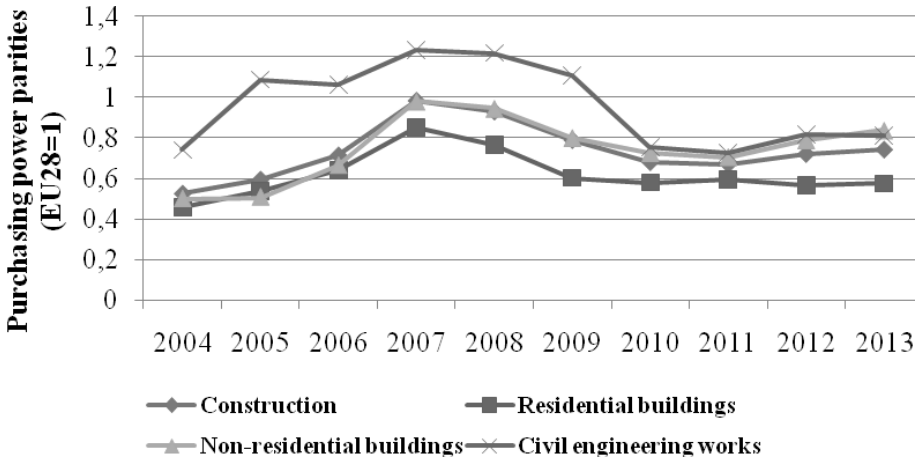

Figure 2. Purchasing power parities in Latvia. Data: Eurostat, figure made by authors.

Demographic aspects are affecting economic situation in each country, and changes in economic situation significantly influences social aspects and life quality. In Figure 3 crude rate of net migration plus statistical adjustment per 1 000 persons of the average population in shown. According to Eurostat metadata, crude rate is calculated as the ratio of the number of events to the average population of the respective area in a given year, and for easier presentation, it is multiplied by 1 000 and the result is therefore expressed per 1 000 persons of the average population. In Europe this rate in researched period from 2004 to 2013 always has a positive indicators, then in all Baltics States is an opposite situation, especially in Lithuania and Latvia.

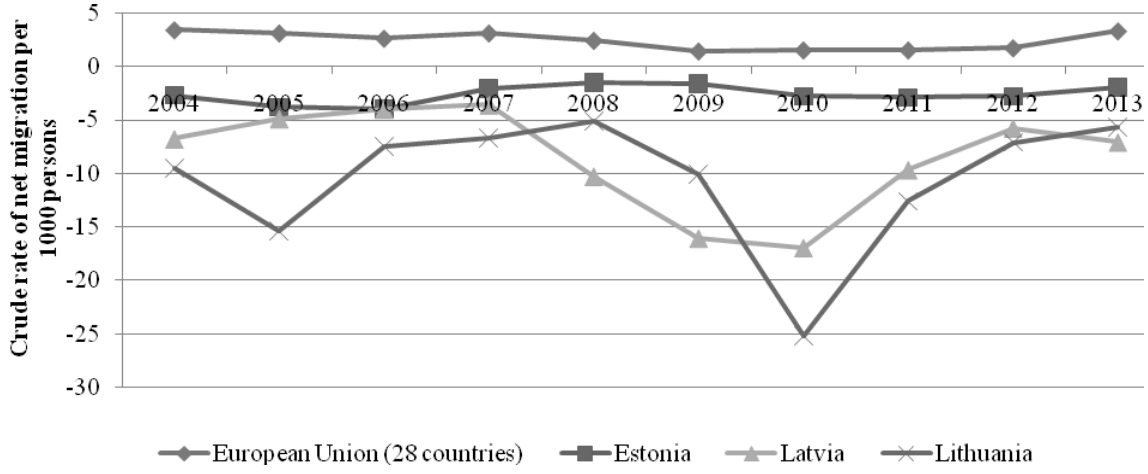

Figure 3. Crude rate of net migration plus statistical adjustment per 1 000 persons of the average population. Data: Eurostat, figure made by authors.

Inequality of income distribution - S80/S20 income quintile share of Baltic States is observed in Figure 4.

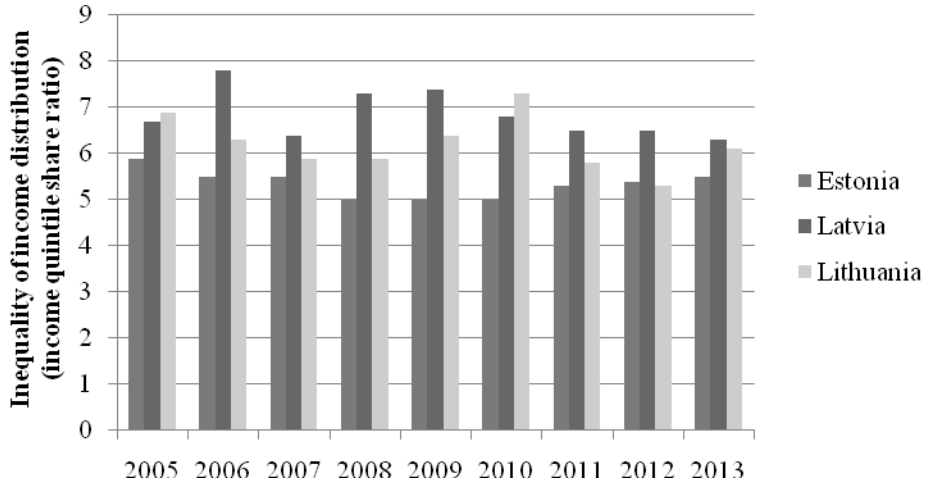

Figure 4. Inequality of income distribution - S80/S20 income quintile share.
Data: Eurostat, figure made by authors.

Comparing inequality of income distribution - S80/S20 income quintile share in Baltic States, the biggest inequality is observed in Latvia. For detalized economic growth calculations there are attempts to analyse characteristics such as economic diversity, international trade, real income of the population, the level of tax burden, the volume of savings, and economic infrastructure (Hajduová, Andrejovský, 2014). In Figure 5 net savings in EU-28, Estonia, Latvia and Lithuania are observed.

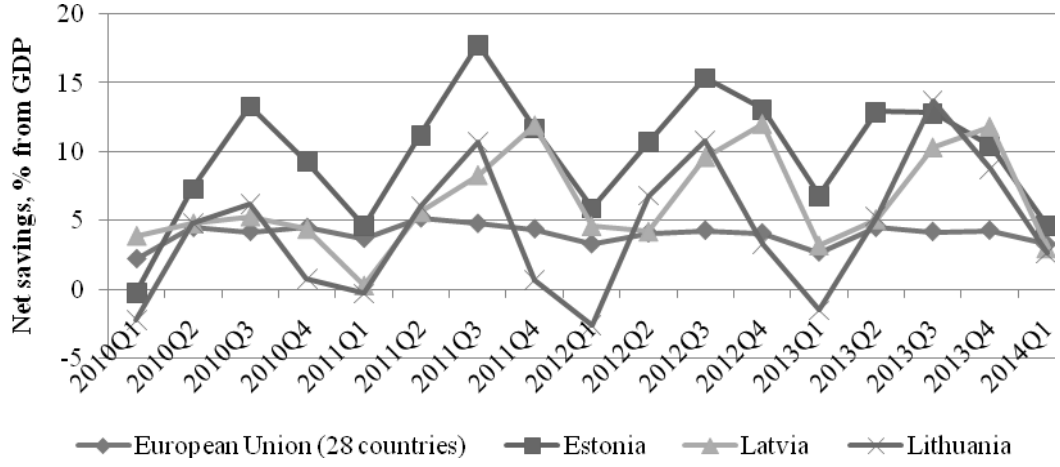

Figure 5. Net savings in Baltic States, % from GDP. Data: Eurostat, figure made by authors.

Net savings has a seasonal character – as observed in Figure 5, but in EU-28 in general the seasonal character of savings is not so pronounced. Type of dwellings in urban and rural area in Latvia are observed in Figure 6.

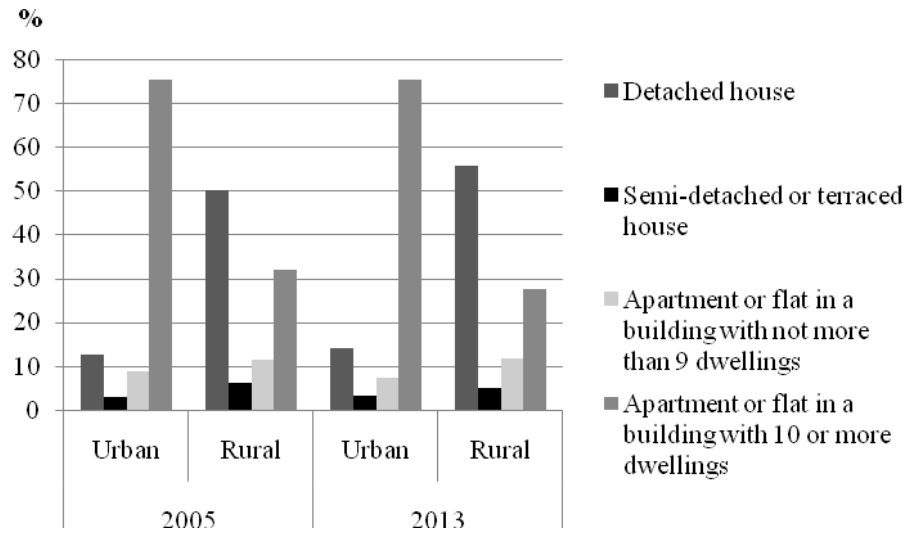

Figure 6. Type of dwellings in urban and rural area in Latvia, %.
Data: Central Statistical Bureau of Latvia (Statistikas datubāzes, 2015), figure made by authors.

There was not a significant change in 2005 and in 2013, the most popular type of dwelling in Latvia in urban areas are apartments or flats with 10 or more dwellings, but in rural areas most popular are detached houses, then follows apartments or flats with 10 or more dwellings. It is found that regional house prices influence regional consumption (Campbell, Cocco, 2007). Also number of construction entreprices differs between regions of Latvia, what is observed in Figure 7.

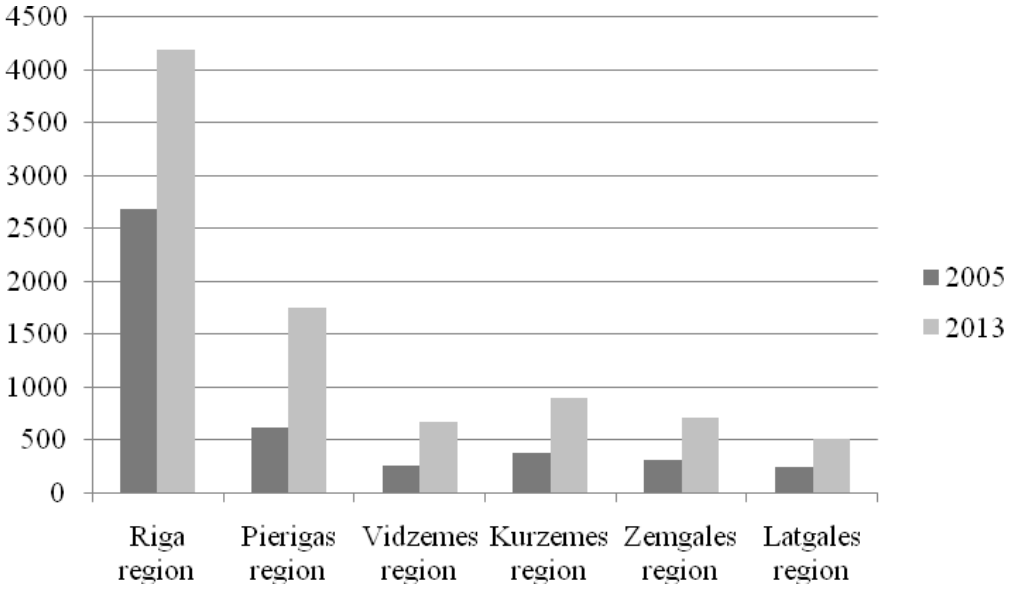

Figure 7. The number of construction enterprises in regions of Latvia in 2005 and 2013.
Data: Central Statistical Bureau of Latvia (Statistikas datubāzes, 2015), figure made by authors.

Analyzing educational activities and job related education activities in engineering, manufacturing and construction, the number of them has grown from 2007 to 2011, what is observed in Figure 8 and had a positive tendency.

Important is a fact, that even though the economy might improve in terms of GDP per capita, it may lag in final consumption expenditure per capita, experience relatively high unemployment rate: indicators that may be more directly related to the well-being of residents (Leontjevs, Dovladbekova, 2014). According to Doing Business Report (Economy ratings, 2014) June 2014 data, ease on doing business has Singapore, also other aspects are there on the high level, just registering property (24th

place), resolving insolvency (19th place) has lower ratios. Latvia in ease of doing business in June 2014 had a 23rd place.

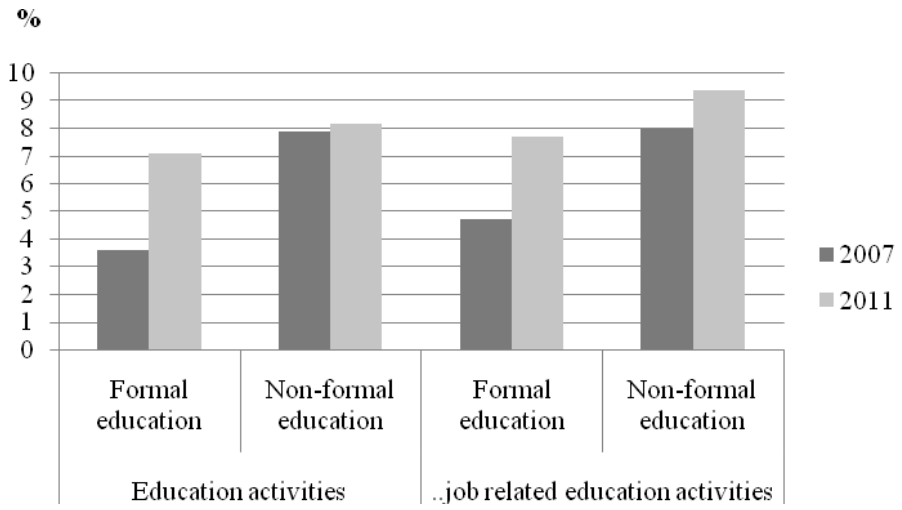

Figure 8. Educational activities and job related education activities in engineering, manufacturing and construction.

The higher position Latvia has in enforcing contracts (16th place).Business environment is especially important for economics of each country, because it has strong connection with income of inhabitants, and life quality as well.

Results and discussion

The results of the study underline the significance of the connection of quality of life and real estate and economic development in general. Better Life Index definition (OECD better Life Index Executive Summary, 2014, 1) is an interactive web-based tool created to engage people in the debate on well-being and, through this process, learn what matters the most to them; OECD is calculating it in 11 topics: community, education, environment, civic engagement, health, housing, income, jobs, life satisfaction, safety and work-life balance. For calculations of housing indicators OECD includes following – dwellings facilities, housing expenditures, number of rooms per person. In theory there is variety of options for quality of life measurements, during this research predominantly socio-economic aspects and role of real estate in life quality were analysed. By analyzing variety of solution options, one of them could be behaviour. Behavior is often at the root of environmental issues, and behavioural innovations can change the traditional borders between 'weak' and 'strong' sustainability, and that has lower cost than monetary incentives technological improvements (Beretti, Figuières, 2013).

Acknowledgement

This work has been supported by the European Social Fund within the project «Support for the implementation of doctoral studies at Riga Technical University».

Conclusions

Improving quality of life should be one of the main economic policy tasks. Quality of life is being influenced by such socio-economic factors as housing affordability, income distribution, level of average wages, demographic indicators, real estate market development in urban and rural areas, purchasing power parities, net savings, fiscal sustainability, educational activities and other factors. For improvement of life quality, it is suggested to solve sustainable development problems, to improve variety of socio-economic and real estate market development indicators, as well supporting entrepreneurship activities. Regulation of economic development significantly affects quality of life – by reducing unwished fluctuations and improving macroeconomic indicators there is a possibility to achieve higher quality of life and achieve higher position in global ratings.

Bibliography

1. *10th Annual International Housing Affordability Survey: 2014 Ratings for Metropolitan Markets.* International Housing Affordability Survey. Introduction by Alain Bertaud. Stern School of Business, New York University, p. 58. [online] [13.01.2015]. Available at http://www.demographia.com/dhi2014.pdf
2. Aizenman J., Jinjarak Y. (2009). Current account patterns and national real estate markets. *Journal of Urban Economics*, Vol.66 pp. 75–89. doi:10.1016/j.jue.2009.05.002
3. Alexander E. R. (2014). Land-property markets and planning: A special case. Land Use Policy, Vol. 41, pp. 533–540; [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.landusepol.2014.04.009
4. Beretti A., Figuières C., Grolleau G. (2013). Behavioral innovations: The missing capital in sustainable development? *Ecological Economics*, Vol. 89, pp. 187–195. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.ecolecon.2013.03.004
5. Beslerová S., Dzuričková J. (2014). Quality of life measurements in EU countries. *Procedia Economics and Finance*, Vol. 12, pp. 37 – 47; doi: 10.1016/S2212-5671(14)00318-9
6. Bischoff O. (2012). Explaining regional variation in equilibrium real estate prices and income. *Journal of Housing Economics*, Vol. 21, pp. 1–15. doi:10.1016/j.jhe.2011.11.002
7. Blackburn W. R. (2007). *The sustainability handbook : [the complete management guide to achieving social, economic and environmental responsibility]* / London, Sterling, VA: Earthscan, p. 803.
8. Campbell J.Y., Cocco J. F. (2007). How do house prices affect consumption? Evidence from micro data. *Journal of Monetary Economics*, Vol. 54, pp. 591–621. doi:10.1016/j.jmoneco.2005.10.016
9. Cheng H., Green A., Wolpert M., Deighton J., Furnham A. (2014). Factors influencing adult quality of life: Findings from a nationally representative sample in the UK. *Personality and Individual Differences, Vol*. 68, pp. 241–246. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.paid.2014.04.026
10. Chiarazzo V., Caggiani L., Marinelli M., Ottomanelli M. (2014). A Neural Network based model for real estate price estimation considering environmental quality of property location. *Transportation Research Procedia*, Vol. 3, pp. 810 – 817. doi: 10.1016/j.trpro.2014.10.067
11. Doing Business (2014). Economy ratings. [online] [13.01.2015]. Available at http://www.doingbusiness.org/rankings
12. Edelstein R., Qian W. (2011). Short-term Investors and Housing Market Dynamics. *IRES Working Paper Series IRES2011-036.* National University of Singapore. [online] [10.01.2015]. Available at www.ires.nus.edu.sg/workingpapers/IRES2011-036.pdf
13. Eurostat. *European Statistics Database.* [online] [13.01.2015]. Available at http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database
14. *Eurostat metadata.* Eurostat. [online] [13.01.2015]. Available at http://ec.europa.eu/eurostat/cache/metadata/en/prc_ppp_esms.htm
15. Fabbri K., Tronchin L., Tarabusi V. (2011). Real Estate market, energy rating and cost. Reflections about an Italian case study. *Procedia Engineering*, Vol. 21, pp. 303-310. doi: 10.1016/j.proeng.2011.11.2019
16. Gal Y., Hadas E. (2013). Land allocation: Agriculture vs. urban development in Israel. *Land Use Policy*, Vol. 31, pp. 498–503. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.landusepol.2012.08.013
17. Hajduová Z., Andrejovský P., Beslerová S. (2014). Development of quality of life economic indicators with regard to the environment. *Procedia - Social and Behavioral Sciences*, Vol. 110, pp. 747 – 754, doi: 10.1016/j.sbspro.2013.12.919
18. Himmelberg C., Mayer C., Todd. *S.* (2005). Assessing High House Prices: Bubbles, Fundamentals, and Misperceptions. *The Open Access Publication Server of the ZWB – Leibniz Information Center of Economics*, Staff Report no. 218, in Cooperation with Federal Reserve Bank of New York. [online] [10.01.2015]. Available at http://hdl.handle.net/10419/60694
19. Krause A. L., Bitter C. (2012). Spatial econometrics, land values and sustainability: Trends in real estate valuation research. *Cities*, Vol. 29, pp. 19–25. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.cities.2012.06.006

20. Lejano R.P., Stokols D. (2013). Social ecology, sustainability, and economics. *Ecological Economics*, Vol. 89, pp. 1–6. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.ecolecon.2013.01.011
21. Leontjevs J., Dovladbekova I. (2014). Has the Crisis Come to an End: Assessments by Latvian Residents. Proceedings of Riga Technical University Conference *Scientific Conference on Economics and Entrepreneurship* (SCEE`2014). Vol. 55., Riga, RTU
22. Mason K.E., Baker E., Blakely T., Bentley R.J. (2013). Housing affordability and mental health: Does the relationship differ for renters and home purchasers? *Social Science & Medicine*, Vol. 94, pp.91-97. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.socscimed.2013.06.023
23. Morais A. C., Aragao J.J.G., Yamashit Y., Orrico R.D., Dourado A.B.F. (2014). Analysing the fiscal sustainability of transit investment projects: The case of the metropolitan railway of Brasília. *Research in Transportation Economics*, Vol. 48, pp. 422-428. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.retrec.2014.09.069
24. Musa M.F., Mohammad M.F., Mahbub R., Yusof M.R. (2014). Enhancing the Quality of Life by Adopting Sustainable Modular Industrialised Building System (IBS) in the Malaysian Construction Industry. *Procedia - Social and Behavioral Sciences*, Vol. 153, pp. 79 – 89. doi: 10.1016/j.sbspro.2014.10.043
25. Nuuter T., Lill I., Tupenaite L. (2015). Comparison of housing market sustainability in European countries based on multiple criteria assessment. *Land Use Policy*, Vol. 42, pp. 642–651. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.landusepol.2014.09.022
26. *OECD Better life index - Executive Summary*. OECD. [online] [13.01.2015]. Available at http://www.oecdbetterlifeindex.org/media/bli/documents/BLI_executive_summary_2014.pdf
27. Ooi J.T.L., Le T.T.T., Lee N.-J. (2014). The impact of construction quality on house prices. *Journal of Housing Economics*, Vol. 26, pp. 126–138. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.jhe.2014.10.001
28. Risholt B., Time B., Hestnes A.G. (2013). Sustainability assessment of nearly zero energy renovation of dwellings based on energy, economy and home quality indicators. *Energy and Buildings*, Vol. 60. pp.217–224. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.enbuild.2012.12.017
29. Teece D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, Vol. 43, Issue 2-3, pp.172-194. doi: 10.1016/j.lrp.2009.07.003
30. Titman S., Twite G. (2013). Urban density, law and the duration of real estate leases. *Journal of Urban Economics*, Vol. 74, pp. 99–112. [online] [13.01.2015]. Available at http://dx.doi.org/10.1016/j.jue.2012.10.003
31. Vanags J., Butane I. (2013). Major Aspects of Development of Sustainable Investment Environment in Real Estate Industry. *Procedia Engineering*, Vol. 57, pp. 1223 – 1229. doi: 10.1016/j.proeng.2013.04.154
32. Wang S., Yang Z., Liu H. (2011). Impact of urban economic openness on real estate prices: Evidence from thirty-five cities in China. *China Economic Review*, Vol. 22, pp. 42–54. doi:10.1016/j.chieco.2010.08.007
33. Xie H., Yu Z., Wu J. (2011). Research on the sustainability of China's real estate market. *Procedia Engineering*, Vol. 21, pp. 243-251. doi: 10.1016/j.proeng.2011.11.2011
34. Zheng S.Q., Kahn M.E. (2007). Land and residential property markets in a booming economy: New evidence from Beijing. *Journal of Urban Economics*, Vol. 69, Issue (2), pp. 743-757. doi:10.1016/j.jue.2007.04.010
35. Statistikas datubāzes [Statistic Database]. Latvijas Centrālās Statistikas Pārvaldes Portāls [Central Statistical Bureau of Latvia]. [online] [13.01.2015]. Available at http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html (In Latvian)

The Economic Burden of Tobacco use and the Life Quality among the Latvian Working Age Population

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Abstract: Despite that numerous epidemiologic and laboratory research studies have revealed scientific evidence linking smoking and disease and the high prevalence of smoking in our country, still not enough data is available about the economic burden smoking costs to society.One efficient way to assess the adverse health effects of smoking on a society is to translate smoking-caused illnesses, premature mortality, and productivity losses into economic terms, a universal marker for measuring the adverse effects of smoking. The aim of the study is to calculate the burden of tobacco use to the health care system and to the society as well to analyze the quality of life of the tobacco users among the working age population in Latvia. The study analyzed secondary data available and calculated the burden of tobacco by using secondary data as well as a literature review was carried out. In Latvia, like in many other new EU Member States the lack of data is the main cause, which prevents comprehensive and objective analysis of the burden smoking causes to society and to smokers. Smoking costs billions of Euros to the Latvian economy, but due to the lack of data, the study does not take in to account the expenditure individuals pay individually (out of pocket) and other indirect expenses for example - of disability, loss of employment, etc. The scientific significance of the study is that the understanding of the relationship between quality of life and tobacco smoking and the burden of the tobacco related diseases on the health care system is important not only for smokers to help them quit, but also helps to create evidence-based health care prevention programs and policy systems that lowers the emerging data and costs caused from tobacco use.

Key words: smoking, economic burden, quality of life.

Introduction

Tobacco use is the leading preventable cause of death in high income countries, and increasingly in low- and middle-income countries. Today, tobacco use causes more than five million deaths per year among adults worldwide. In addition to mortality, tobacco use also causes preventable diseases, poor health, and disability. Numerous epidemiological and laboratory research studies have revealed scientific evidence linking smoking and disease. A 50 years follow – up study hold in Brittan (started 1951) showed that, for continuing cigarette smokers, the eventual risk of dying as a result of their smoking varied from about one-half to about two-thirds; however, for the purposes of general liability, the authors concluded that smoking killed about one half of those who regularly smoked. The findings have been supported by studies in other countries (Assessment of the Economic…, 2011). A Danish study found that, in addition to the years lost from dying earlier from smoking, a greater number of years survived are marred by poor health. Males who continued to smoke heavily (defined as at least15 g tobacco per day) had 8 more years in poor health than never-smokers. Females who continued to smoke heavily had an average of 12 more years spent in poor health, in addition to the loss of life (Tobacco or Health…, 2004).

The European region is disproportionately negatively affected by tobacco mortality and morbidity. These premature deaths represent a loss of human capital, since the skills and talents of those who die prematurely are lost to society. Apart from the loss of human capital attributable to smoking, there are also other direct and indirect costs of smoking that impose economic burdens on both smokers and non-smokers. The direct costs are usually associated with healthcare for smoking- related diseases among smokers and second – hand smoke (SHS) victims. The indirect costs are mostly linked to productivity losses, and to foregone income taxes and contributions to social security among patient-smokers, patient-SHS victims, and the people who care for them, who would otherwise be in paid employment ("informal care") (Tobacco or Health…, 2004).

Another instrument to measure the value of lives lost prematurely is the number of years of potential life lost (YPLL). YPLL denotes the number of years an individual would have lived had they not died of a smoking-attributable disease. The YPLL is determined the number of years of life expectancy remaining at the age of death (Attitudes of Europeans…, 2012). As the Latvian Center for Disease control and Prevention (CDC) data shows, than the YPLL form cardiovascular diseases (CVD) in the working age (15-64 years) population in Latvia are 3020 per 100 000 inhabitants and the YPLL for cancers is 1977 per 100 000 inhabitants. More YLPP are lost among men than women (2377 versus 643 per 100 000 for cardiovascular diseases and 1134 versus 843 per 100 000 inhabitants for cancer) (Skrule, 2013).

Tobacco's cost to governments, to employers and to the environment includes social, welfare and health care spending, loss of foreign exchange in importing cigarettes; loss of land that could grow food; costs of fires and damage to buildings caused by careless smoking; environmental costs ranging from deforestation to collection of smokers' litter, absenteeism, decreased productivity, higher numbers of accidents and higher insurance premium (Mackay, Eriksen, 2002). As mentioned before the economic costs of smoking extend beyond the direct costs of smoking – related illness and death and can be attributed to four elements: 1.Healthcare expenditures attributed to the treatment of smoking – related diseases in active smokers and those affected by second – hand smoke; 2.Loss of earnings, employee absence and reduced workplace productivity. 3. The monetized value of premature mortality and disability as assessed by disability – adjusted life years lost or YPLL. 4. Other indirect costs such as fire damage related to smoking and costs related to cleaning up after smoke. Smoking is the biggest cause of discarded litter in many cities (ERS).The term 'costs of smoking' is defined as the difference between healthcare or other costs that actually occur due to smoking and the costs that would have occurred had there been no smoking (Assessment of the Economic…, 2011). Despite this well documented, hazardous impact on morbidity and life expectancy, the prevalence of smoking in Latvian population is still enormous; the prevalence of daily smokers among the working age population is 34.3 %, were men smoke significantly more than women: 52.0 % versus 17.6 % Most of the male daily smokers smoke for 26 years and more (27.6 %) and women 1-5 years (27 %). The average cigarette consumption per day is 1-14 cigarettes (nearly one package of cigarettes per day) (52.7 %), but 41.2 % smoke 15-24 cigarettes per day (Pudule, Grīnberga, 2013).

The average smoking prevalence in EU is 28%, according to the statistics, Latvia has one of the highest smoking rates in the EU (36 %), where our neighbors Lithuania and Estonia respectively 30 % and 26 %. Most of the smokers in the EU are unemployed (49 %) which indicates that they don't pay taxes for the government, but receive social guaranties (for example, government provided health care) (Attitudes of Europeans…, 2012).

There is very little information about the direct and indirect costs of smoking in Europe.Some estimates are available for individual countries like the Netherlands, Germany, Sweden,Iceland, and the UK, but they employ different methods, making the resulting figures incomparable. This lack of knowledge creates an urgent need for a comprehensive study estimating the costs of smoking (Assessment of the Economic…, 2011).

Public healthcare expenditure in the EU on treating smoking attributable diseases suffered bysmokers is estimated at around 36.6 billion EUR in 2000, which corresponds to 6 % oftotal healthcare spending in the EU 27 and 0.4 % of GDP (Jarvis, Vincze, 2009). Smoking related productivity losses cost the EU economy an estimated 12.4billion in the year 2000. This is the equivalent of 0.1 % of EU 27 GDP for 2000. A study on liability and the health costs of smoking Absenteeism accounted for 91 % of total productivity costs (Jarvis, Vincze, 2009). Other studies show that smoking – attributable costs for respiratory disease and cardiovascular disease (the most to smoking attributive diseases) provide a conservative cost of smoking estimate for Europe, which ranges between 105.83 billion and 130.31 billion or between 228 and 281 euro per capita. The indirect costs represent about 2/3 of the total costs of smoking, and are between 70.55 billion and 86.87 billion Euros (Tobacco or Health…, 2004).

The annual government spending from the GDP for the health care system in Latvia in the year 2013 was 3.16 % (515.9 billion LVL). Most of the money was spent treating cardiovascular diseases and

cancer as they are the leading cause of death in Latvia (155 per 100 000 inhabitants under the age of 64 and 292 cancer death cases per 100 000 inhabitants in year 2012) (LRVM, 2013).

Smoking tobacco as the leading cause of preventable illness in Latvia and around the world not only is one of the leading causes for economic burden of the health care system in Latvia, but also has a major impact on the quality of life for the smokers. Quality of life (QoL) has become an important measure of outcomes across all specialties, in both research and clinical settings. A reciprocal relationship exists between depression and smoking such that depression is more common in smokers than non-smokers, and smoking is more common in depressed versus non-depresses individuals. Studies in the general population have found that tobacco smoking is a risk factor for depression. A recent study showed that the presence of smoking doubled the risk of development of a de-novo episode of major depression in women followed up for 10 years (Stafford, Berk, 2013). As the Eurobarameter data shows most of the smokers are unemployed (49 %) and most of the time have difficulties to pay the bills (46 %) and have low self-positioning on the social – staircase (34 %), which indicates that tobacco smokers suffer from lower life quality than non-smokers (Attitudes of Europeans…, 2012).

The main aim of the study is to calculate the burden of tobacco use to the health care system and to the society as well to analyze the quality of life of the tobacco users among the working age population in Latvia. The hypothesis is that smoking-related expenditure of the state and the population is unpredicted high and smokers are predicted to a lower quality of life than non-smokers.

Methodology

In order to assess the direct and indirect tobacco costs to society, the study used different calculation methods and principles. To calculate the real cost from a cigarettes pack to the society, the methodology of a study from the Polytechnic University of Cartagena was used. The original study implemented in the year 2010 used the so-called Vale of a Statistical Life (VSL) to determine the mortality cost associated with tobacco consumption. Due to the calculation of the study the private mortality cost of smoking was estimated at 78 EUR per pack for men and 54 EUR per pack for women (Belén, Cobacho, 2010). The VSL year approach is based on the assumption that VSL equals the present discounted value of series of annual values and the each year of life has identical value (Viscusi, Hersch, 2007). To calculate the costs of cigarette smoking per capita, we used secondary data from the Spanish study to calculate the average private mortality cost of smoking. The average cost of smoking was calculated as 66 EUR per capita.

Since Latvian statistics is missing data to provide information on the prevalence of smoking in absolute numbers, then to calculate the number of smokers in absolute numbers, we used data of the Central Statistical Bureaus (CSB) resident database by gender, as well as Disease Prevention and Control Centers (CDC) data on the prevalence of smoking by gender (Pudule, Grīnberga, 2013). For data calculation we used the following formula

$$x = \frac{a * b}{100} \quad ; (1)$$

where x = the number of smokers by gender
a = permanent residents (male / female)
b = smoking prevalence by gender;

We also calculated cigarettes smoked per capita, based on the CSB database which provides data about the current number of the population of Latvia and the American Cancer Associations Tobacco Atlas (The Tobacco Atlas, 2009), which is the only objective available source of information on the number of cigarettes consumed per capita in Latvia. The number of cigarettes consumed per capita we calculated by the following formula, assuming that a single standard cigarette pack contains 20 cigarettes:

$$x = \frac{a * b}{c} \quad ; (2)$$

where x = pack of cigarettes consumed per capita
a = the number of cigarettes consumed per capita

b = the population of Latvia
c = number of cigarettes in one standard size of a cigarette pack (20 cigarettes)

To calculate the number of cigarettes smoked among the current smokers (15-64 years) and the real cost per cigarette pack, we used the Spanish survey and the CDC survey (Pudule, Grīnberga, 2013) data, and the CSB population database. The calculation is made for both women and men. The calculation is made according to the following formula:

$$x = \frac{a * b}{100}; \quad (3)$$

where x = the number of smokers who smoked at least one pack of cigarettes per day;
a = total number of current smokers in the age group 15-64 years (per gender)
b = prevalence of smokers who smoke at least one pack of cigarettes per day (15-64 years)

In order to calculate the burden of smoking for the health care system per capita we used secondary data from the European Commission. According to the European Commission's survey data, the smoking-related health care costs per capita in year 2000 for Latvia was 1.4 euro (Stafford, Berk, 2013).

In this study we calculated the potential loss of income from the citizens in working age who have died from diseases that could potentially be closely related to the use of tobacco products, according to surveys mostly – cardiovascular diseases (CVD) and cancers(European Lung…). Latvian statistics is lacking data on how much one inhabitant contributes to the national economy. To get these data we used the Latvian Ministry of Finance recommendation to equate the contribution to the country's GDP per 1 inhabitant. The study used the CSB data on GDP per 1 employed (2012 – 25 879 EUR) and the CDC data on mortality from CVD and cancer in the age group – 15-59 years, taking into account that smokers on average live about 8 years shorter life span than non-smokers (*Latvijas veselības aprūpes...*, 2013).

One of the most used indirect cost measurements that indicate tobacco burden for the society is the calculation of the costs fire caused from smoking (Leistikow, Martin, 2000). In this study specially requested secondary data from the Latvian State Fire service was used. As the data from the Latvian State Fire Service indicates, that on average, the fires are removed in 64.6 min, where fire per minute costs1.98 EUR.

To analyze the quality of life of smokers we used secondary data from the Latvian CDC study (Pudule, Grīnberga, 2013). As characteristic for quality of life we selected the level of education of smokers who smoked 15 cigarettes and more and attitude against their health.

Results and discussion

As shown in Figure 1, especially among men, the smoking prevalence is very high. More than half of the men in working age smoke, especially high prevalence of smoking among men are in the economically most active age (25-54 years). As indicated by Poland's 8-year follow up study, smoking is a high risk factor of premature death. The study showed that daily smokers are 3.6 times more likely to develop and die from a chronic illness, than their nonsmoker counterparts (Dziankowska-Zaborszczyk, Bryła, 2014). Research data show that smokers lose an average of 8 years of their potential life years where they could be active members of the society and contribute to the national economy (Boyle, 1997).

The prevalence of smoking in the Latvian society is high and a burden not only for the national health care system, but also to the overall national economy. Latvia has one of the highest smoking prevalence in the European Union, the average in Europe is 28 %, where in Latvia smoke 36 %, but in our immediate neighbors Lithuania and Estonia smoke respectively 30 % and 26 % of the population (Attitudes of Europeans…, 2012).

The calculation of the absolute number of smokers in the country among the working aged population, found that the absolute number of smokers in our country are 52 % or 258 440 men and 17.6 %, or 86 874 women. Higher smoking prevalence is among men in the working age and increases among young

people, particularly young women. In the United States conducted study calculated the premature mortality costs of smoking-related diseases and estimated that the PVLE (present value of lifetime earnings) were highest for younger people partly because younger people had the most time ahead of them in the labor force and thus the most potential future productivity. PVLE estimates were higher for men than for women for primarily two reasons: (1) a higher percentage of men than women were typically in the work force; and (2) men typically were paid a higher wage than women (Menzin, Marton, 2012).

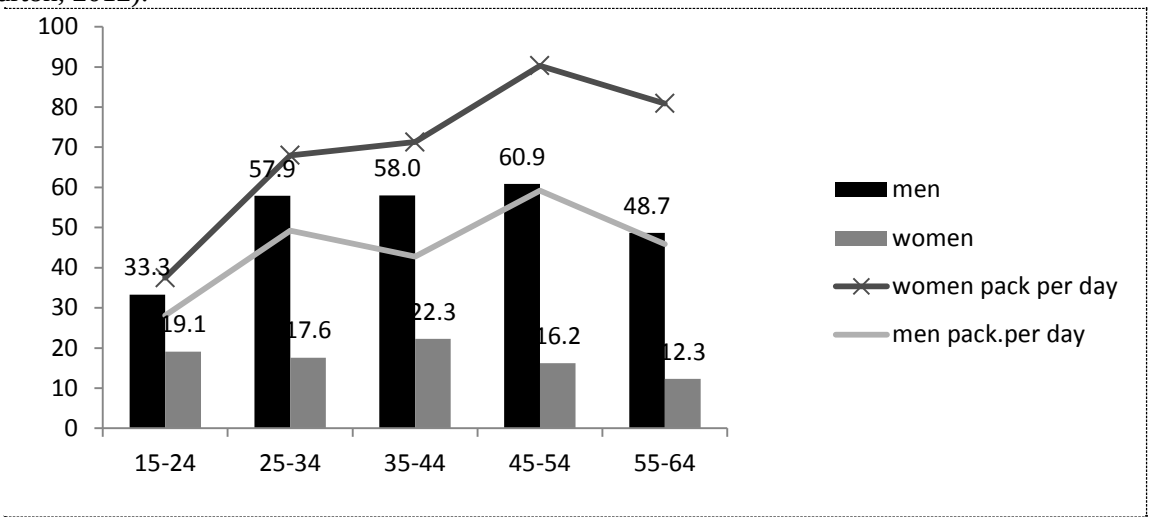

Figure 1. Prevalence of daily smokers (15 and more cigarettes per day), by age and gender.

As pointed out by the European Commission, the costs of smoking per capita for the health care system in Latvia are 1,4 EUR. Which based on the CSB data on the number of residents in Latvia (2 001468 inhabitants in 2014), causes 2 802255.2 EUR each year for the Latvian health care system (Jarvis, Vincze, 2009). As shown in Figure 1, than form all daily smokers most cigarettes for both genders are smoked in the age group of 35-44 years and 45-54 years. Taking into account the data on the number of cigarettes smoked per capita - 785 cigarettes (WLF/ ACS, 2009), it can be concluded that the number of cigarettes smoked during the year in Latvia is 157 1152380 cigarettes our 78 557619 pack of cigarettes. Overall, based on the data from the Spanish colleagues and taking into account that the real costs of one package of cigarettes is 66 Euro, then the real costs of cigarettes per pack during the year was 84802854 51 EUR. Which during the year for woman who smokes costs 19.710 EUR and 28.470 EUR for men (Belen, Cobacho, 2010). Based on studies that shows that smokers on average live about 8 years less than non-smokers, and of the GDP per capita, we calculated the potential burden for the economy from CVD and cancer. The calculation shows that the total burden is 67 927472 EUR per year. Other studies have found that considering both the smoking-attributable healthcare costs and the value of lost productivity caused by smoking-attributable deaths and disability, a review article by Lightwood and Collins et al. (2000) concluded that the total economic costs of smoking represent a significant loss for the whole economy, reaching 2.1 %–3.4 % of gross domestic product (GDP) in Australia, 1.3 %–2.2 % of GDP in Canada, and 1.4%–1.6% of GDP in the United States (Assessment of the Economic…, 2011). The European Commission estimated that public health spending on smoking attributable diseases (SAD) in 2000 in Latvia was 5.9 % of GDP or 501 million EUR. In 2000 Latvia's government spent 8.1 % from the healthcare budget to treat SADs our 24 million EUR. New Member States, especially Estonia, Lithuania Latvia and Hungary, seem to be bearing a heavier burden from smoking. The total spending for SAD in Latvia in year 2000 was 24 million Euros – 12 % for lung cancer, 5 % for all cancers and 56 % for CVD treatment (Jarvis, Vincze, 2009).

Smoking is one of the leading fire causes in the world, despite the lack of data for Latvia; many studies provide significant evidence that cigarette causes numerous fire disasters, cigarette light cause an estimated 100.000 US and one million global, child playing fires per year (Leistikow, Martin 2000). In UK smoking materials remains the main cause of fatal accidental fires in the home, accounting for 82 deaths and 671 in 2012/13 (The economics…, 2014).To calculate the direct costs

from fire potentially caused by smoking, we used data from State Fire Service - costs of 1 minute fire elimination, the average time of fire and the number of calls in year 2013. The number of calls in 2013 was the 9821 call, 1min costs– 1.98EUR, the average duration of the fire – 64.6 minute. The direct costs from fire potentially caused by smoking - 1256184.47EUR(1.98 x 64.6 x 9821).The State Fire service indicates that approximately 30% of fires are caused by smoking, which forms a cost of EUR 37 6855.34(1256184.47 x30%) for the government.

As shown in Figure 2, then a large proportion of smokers' quality of life are characterized by their attitude towards their health. People with higher levels of education are more concerned about their health than people with lower levels of education. Similarly, women are more concerned about their health than men. As shown by the results of a study carried out in Australia, then smoking was independently associated with depression in patients with heart disease. Smoking was an independently associated with poor mental HRQOL. These data added to the evidence for smoking cessation campaigns in the primary prevention of depression (Stafford, Berk, 2013).

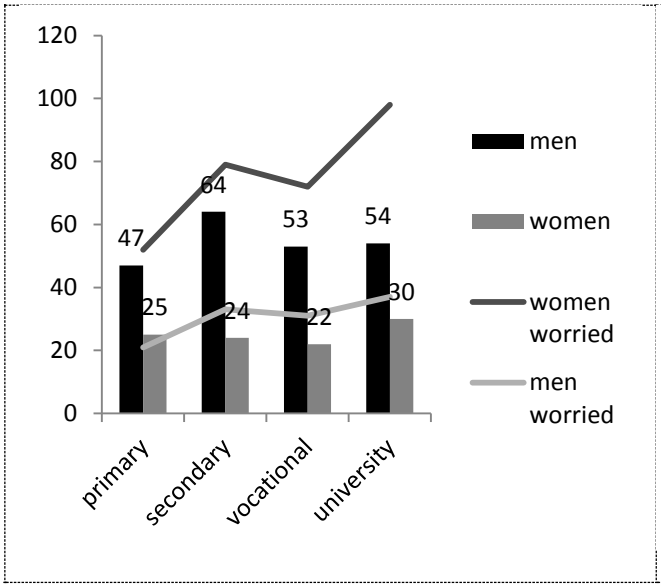

Figure 2. Prevalence of education and concern about damage to health by sex (%).

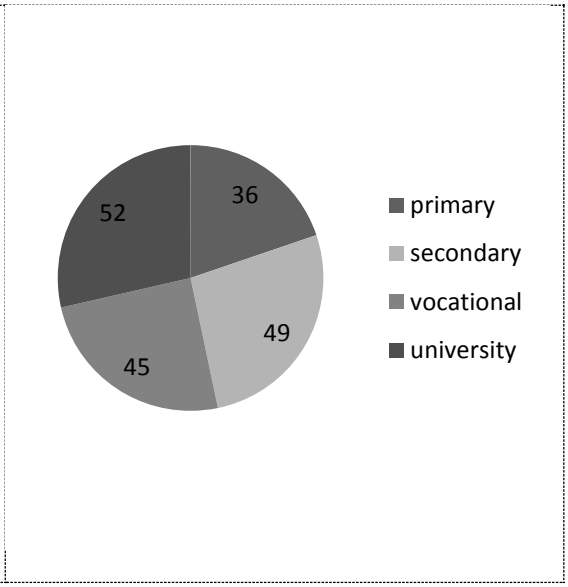

Figure 3. Willingness of daily smokers to quit smoking by education (%).

As shown in Figure 3, the desire to quit smoking and improve their health and therefore the quality of life depends on the education level of the society, especially among men. Lower levels of education are associated with lower income and social status in society. As many surveys show than in most European countries smoking are now more prevalent in lower socio-economic groups, which also have a higher burden of other risk factors. In addition in the UK cessation rates are lower in the most disadvantaged groups, which may be linked to higher nicotine dependence among these smokers, even after adjusting for cigarette consumption (Tobacco or Health…, 2004). A Finnish study showed that daily smokers had both lower health-related and overall quality of life than never-smokers among the Finnish adult population. Health-related quality of life profiles showed that daily smokers did worse than never-smokers in a considerable number of the health dimensions. The effects of smoking were observed not only through health: the daily smokers registered significantly lower ratings of overall quality of life compared with never-smokers, too. Both the health-related and overall quality of life of ex-smokers approached those of never-smokers (Heikkinen, Jallinoja, 2008).

Conclusions

- In Latvia, like in many other new EU Member States the lack of data is the main cause, which prevents comprehensive and objective analysis of the burden smoking causes to society. The country has a high prevalence of smoking in the working-age population, especially among men, which leads to a higher risk of developing and dying prematurely from a chronic illness, thus causing heavy losses to the national economy, which it otherwise would benefit from these citizens economic activity.
- Smoking costs to the Latvian economy billions, but the due to the lack of data, the study does not take in to account the expenditure individuals pay individually (out of pocket) and other indirect expenses for example - o disability, loss of employment, etc. As the major health consequences of smoking usually manifest themselves only after several years of smoking, both health-related and overall quality of life measurements could be used as an intervention tool for motivating people to quit.Given that smoking is more prevalent among the population with lower income and social status, it creates an even greater threat to the quality of human life and health.
- The research results provide insight into the smoking burden caused for the society that is borne by society as a whole, and the high costs to the public health, as well as on smoker's lower quality of life, enhanced by smoking induced expenditure. Results of the research can be used in public health policy planning documents and implementation of health promotion activities, as well as providing motivation for smokers to stop smoking with the aim - a better quality of life. The study also points to the need for the country to implement such research and to collect and compile objective data to produce evidence-based information to reduce the damage caused by smoking and give arguments in a dialogue with industry representatives.

Bibliography

1. *Assessment of the Economic Costs of Smoking* (2011). World Health Organization (WHO). Economics of tobacco toolkit: assessment of the economic costs of smoking, pp.8-19. [online] [23.12.2014.]. Available at http://whqlibdoc.who.int/publications/2011/9789241501576_eng.pdf
2. *Attitudes of Europeans towards tobacco* (2012). Special Euro barometer 385, Directorate-General Health and Consumers, European Commission (EC). [online] [3.01.2015.]. Available at http://ec.europa.eu/health/tobacco/docs/eurobaro_attitudes_towards_tobacco_2012_en.pdf
3. Belén M., Cobacho T., Ángel N., Parreño J. (2010). *El coste de la mortalidad asociado al consumo de tabaco en España* (The costs of tobacco related mortality in Spain). Revista Española de Salud Pública 84 (3) pp. 271-280. (in Spanish)
4. Boyle P. (1997). Cancer, cigarette smoking and premature death in Europe: a review including the Recommendations of European Cancer Experts Consensus Meeting, Helsinki, Finland, October 1996, *Lung cancer journal*, May Issue 17(1), pp.1-60.
5. Dziankowska-Zaborszczyk E., Bryła M., Maniecka-Bryła I. (2014).The impact of smoking tobacco and drinking alcohol on mortality risk in people of working age -results of an 8-year study in a large urban center, *Medycynapracy*, Issue 65(2), pp. 251-60. (in Polish)
6. Heikkinen H., Jallinoja P., Saarni S.I., Patja K. (2008). The Impact of Smoking on Health-Related and Overall Quality of Life: A General Population Survey in Finland. *Journal of Niccotine and Tobacco research*, Issue 10 (7), pp.1199-1207.
7. Jarvis A., Vincze A., Falconer B., Garde A., Gerber F., Daynard R. (2009). *A study on liability and the health costs of smoking*, European Commission DG Sanco. [online] [30.12.2014.]. Available at http://ec.europa.eu/health/tobacco/docs/tobacco_liability_en.pdf
8. *Latvijas veselības aprūpes statistikas gadagrāmata 2012.* (2013). (Statistical yearbook of health care in Latvia 2012). Slimību profilakses un kontroles centrs (SPKC). (Center of disease control and prevention). [online] [6.01.2015.]. Available at http://www.spkc.gov.lv/veselibas-aprupes-statistika/ (in Latvian)
9. Leistikow B., Martin D.C., Milano C.E. (2000). Fire Injuries, disasters, and costs from cigarettes and cigarettes lights: a global overview, *Preventive medicine, Issue 31*, pp 91-99. [online] [7.01.2015.]. Available at http://leistikow.ucdavis.edu/SMOKINGFIRES.PDF

10. Mackay J., Eriksen M. (2002). *The Tobacco Atlas*, World Health Organization pp 40. [online] [4.01.2015.]. Available at http://www.who.int/tobacco/media/en/title.pdf
11. Menzin J.**,** Marton J.P.**,** Menzin J.A., Willke R.J.**,** Woodward R.M.**,** FedericoV. (2012). Lost productivity due to premature mortality in developed and emerging countries: an application to smoking cessation, *BMC Medical Research Methodology*. *[online] [6.01.2015.]. Available at* http://www.biomedcentral.com/1471-2288/12/87
12. Pudule I., Grīnberga D., Velika B., Gavare I., Villeruša A. (2013).*Latvijas iedzīvotāju veselību ietekmējošo paradumu pētījums, 2012 – 2 daļa* (Health behavior among Latvian adult population, 2012 – part 2, Slimību profilakses un kontroles centrs, Rīga, Latvija. (In Latvian)
13. Skrule J. (2013). *Priekšlaicīgas mirstības analīze: Potenciāli zaudētie mūža gadi Latvijā 2012 gadā* (Premature mortality analysis: Potential years of life lost in Latvia in 2012), Ed. Rozentāle G., Riga, Latvia [online] [3.01.2015.]. Available at http://www.spkc.gov.lv/sabiedribas-veselibas-datu-analize/ (in Latvian)
14. Stafford L., Berk M., Jacson M. J. (2013). Tobacco smoking predicts depression an poorer quality of life in heart disease, *BMC Cardiovascular Disorders*. [online] [2.01.2015.]. Availabl at http://www.biomedcentral.com/1471-2261/13/35
15. *The economics of tobacco.(2014). Action on smoking and health. [online] [6.01.2015.]. Available at* http://www.ash.org.uk/files/documents/ASH_121.pdf
16. The Tobacco Atlas (2009). World Lung Foundation/ American Cancer society (WLF/ACS) [online] [5.01.2015] Available at http://www.tobaccoatlas.org/products/cigarette_consumption/fig_b/
17. *Tobacco or Health in the European Union: past, present and future* (2004). Prepared by the ASPECT Consortuim, the Directorate-General for health and Consumer protection, European Commission (EC). [online] [12.12.2014.]. Available at http://ec.europa.eu/health/ph_determinants/life_style/Tobacco/Documents/tobacco_fr_en.pdf , http://www.erswhitebook.org/files/public/About/Slideset%20for%20White%20Book.pdf
18. *Veselības nozares budžeta projekts 2014.gadam* (2013). Latvijas Republikas Veselības ministrija (LRVM). (The budget project for Health care systems for 2014). [online] [10.01.2015.]. Available at http://www.vm.gov.lv/images/userfiles/2014_budzets_07_11_2013_ar_otro_lasijumu.pdf (in Latvian)
19. Viscusi W.K., Hersch J. (2007).*The Mortality cost to smokers*, National Bureau of economic research. [online] [6.01.2015.]. Available at http://www.nber.org/papers/w13599

Education for Sustainable Development at Home Economics

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Abstract: Each period of time in the world is characterized by its distinctive features. This time is connected with a rapid growth of mankind's well-being. Scientific achievements promote rapid progression of well-being, but problems are observed parallel with the positive traits. It is a challenge to mankind for its sustainable existence. Sustainability requires a common vision on society and nature. Sustainable development can be ensured if there is a correlation not only between the developments of national economy, social sphere and protection of nature, but it is necessary to ensure an active public participation in the development. Sustainable development is characterized by three interrelated dimensions: environmental, economic and social. The essence of education for sustainable development is an invitation for people to act responsibly in everyday life and to live and fulfil themselves in accordance with the social, cultural, economic and natural environment around them. The task of the sustainable education development is not only to give the knowledge about the sustainable development but also to develop skills, form the values and increase the motivation for active cooperation in carrying out the sustainable development. The education for sustainable development mainly is carried out as an interrelated subject link and it is integrated in the content corresponding to the level of education and the specifics of every subject. Home economics and technologies is one of the subjects at school. It deals with various topics related to sustainable development. The research has been carried out within education for sustainable development at Home Economics and technologies lessons. The aim of the research is to clarify students' understanding and preparedness for sustainable development. The used methods: questionnaires, discussion and observation. The place of the research: elementary school in Jelgava, Latvia. The obtained results reveal that the respondents understand the essence of the education for sustainable development. Students in their stories first emphasized real events around them, their surroundings. They understand their responsibility and the necessity to preserve the environment.

Keywords: sustainable development, education in school, Home Economics and technologies.

Introduction

The last decades in the world development are characteristic not only with high scientific achievements, the development of information technology, the growth of economics and the high level of culture. Alongside with the rapid growth of well-being and the development of the national economy it is possible to observe some threatening problems in the context of the environment. The complications with the power supply, the rapid climate changes, the globalization of economics, the decrease of the natural resources, the pollution of air and other environmental and development problems cause threats to the future of the mankind.

Due to the scientific and technical progress the activities of a human being nowadays has become the factor that forms the surrounding environment. To a great extent the activities of human beings can threaten their own survival. That is why the present situation asks for active participation in the recovery of the environment (Kļaviņš, 2012).

The observations and specific research of many scientists in the world have revealed the real situation in the depletion of the planet Earth. According to their conclusions radical changes are necessary to promote the sustainable development. It is necessary to concentrate on the introduction of new consumption, production and distribution principles.

"The sustainable development is the development which satisfies the needs of the present generation, without causing problems to the next generations to satisfy their needs"- says the definition of the United Nations (UN) Environment and development commission (Report of…, 1987). It emphasizes that on the one hand – the development is necessary to satisfy the peoples' needs and improve the

quality of their life but on the other hand – it must be done in the way that would preserve the similar opportunities of the nature and environment availability now and in the future (Zaļoksnis, 2009).

The sustainable development is not a new conception. It is the newest expression of the age long ethics connected with the relations between the people and the environment and the responsibility of the present generation to the next generations. The sustainability functions only in the direction from the bottom to the top. It needs such society whose majority supports the participation in the achievement of the sustainable development aims and which cooperates both in the local and regional level (Rompczyk, 2007).

According to the global directives of the UN and UNESCO the Law of Environment protection of Latvia formulates: sustainable development- is the integrated and balanced development of the society's well-being and economics satisfying the present social and economic needs of the inhabitants and providing the observation of the environmental protection demands not threatening the possibilities to satisfy the needs of the next generations as well as ensuring the preservation of the biodiversity (Vides aizsardzības..., 2013). It has also been emphasized in the Sustainable Development Strategy of Latvia until 2030 (Sustainable Development..., 2010) specifying the basic idea of the sustainable development invites to satisfy the needs of the present generation, balancing public welfare and environmental and economic development interests and currently ensuring the observation of the environmental requirements and the preservation of the natural diversity in order to avoid the reduction of possibilities to satisfy the needs of the future generations.

The sustainable development can exist if there is a mutual interaction between the economic development of the national economy and the social sphere and the environmental protection and an active participation of the society members in the development process is provided (Rompczyk, 2007, 39).

For a human being to get involved and to function sustainably it is not only necessary to have the appropriate knowledge about the environment, economics and the society but it is also necessary to have the skill for sustainable actions. Therefore the task of the sustainable education development is not only to give the knowledge about the sustainable development but also to develop skills, form the values and increase the motivation for active cooperation in carrying out the sustainable development (Pelnēna, Kļaviņš, 2009; McKeown, 2002).

The education for sustainable development is the education which promotes the opportunities of every individual to obtain knowledge, values and skills which are necessary for cooperation in the decision making about the individual or collective activities in the local and the world level to improve the quality of life at this moment, not causing the threats to the necessities of the next generations (Vides aizsardzības..., 2013).

In the plan of the national environmental politics alongside with other political aims several goals are mentioned which promote the further direction of the education for sustainable development:

- to form common and logically organized system of environmental education in all education levels, satisfying the demand for the environment specialists,
- to improve the education methods and work out new educational aids in the environmental education for all education levels,
- to provide the educations for sustainable development,
- to strengthen the environmental education as lifelong education in cooperation with the state enterprises and public organizations,
- to promote the foundation of the sustainable development institute (Nacionālais vides..., 2004).

The 8th chapter of the Law of environmental protection „Environmental science, environmental education and education for sustainable development" determines the direction of the environmental education and development. The 42nd clause of the Law determines precisely their connection in the education process: The subject or the course standard in the compulsory curriculum corresponds to each subject specifics matching and providing succession in different education levels, including the

questions which relate to the environmental education and the education for sustainable development **(**Vides aizsardzības..., 2013).

The education for sustainable development mainly is carried out as an interrelated subject link and it is integrated in the content corresponding to the level of education and the specifics of every subject. The use of the right methods for different education and age levels of the students advances the effectively of the education for sustainable development. The aim full progression of the students' knowledge and skills revealing the unknown and helping a pupil to construct the further knowledge succeeds in a pupil's understanding of the sustainable development. It increases the inner motivation of a pupil not only to accept the essence of the sustainable development, but also to use it skilfully in his everyday life. A teacher plays a great role here.

V.Dislere indicates that Home economics and technologies teacher is an ongoing student work organizer in both in school activities and in out of school activities. Teacher's work success is largely determined by her/his good background and readiness of theoretical and practical training and organizational skills (Dislere, 2012). The paradigms of the education are changing. K.Mandolini stress that a teacher should not become an instrument in the hands of global economic demands, but a professional who actively responds to new events and social exigencies (Mandolini, 2007).

When carrying out the education for sustainable development it must be considered that the learning process should be directed to a pupil (based on students' experience and questions), to processes (attention should be paid to the natural laws), to an action (to develop the competence of action), to evaluation (to develop critical thinking and expressing one's opinion), to the society (to involve students in acknowledging and solving the real problems), as well as should the problems looked upon holistically (including economical, ecological and social aspects) (Kalniņa, 2007). When creating an integrated study model, it is possible to incorporate various aspects of study content in a meaningful whole. Teaching and learning become as one entity (Petere, 2013).

Home economics and technologies is one of the subjects at school. It deals with various topics related to sustainable development. The aim of the subject is to improve the learner's understanding of habitat environment safety and quality conditions and possibilities for its improvement, to promote the learner's practical action and social cooperation skill development, for anyone to be able to plan and organize personal household, to comply with safety conditions, to handle extreme situations adequately and with understanding and to creatively involve in the implementation of technological processes. It is firmly connected with environmental education guidelines. One of the Standard of Primary Education objectives is to promote a responsible attitude towards oneself, family, society, environment and the state (Noteikumi par..., 2014).

Throughout the century's home economics has provided its significance in increasing the quality of human life. From the beginning of the creation of the subject there is a close bond with the idea /beliefs of sustainable development. Considering the leading political and economic position/views characteristic for the age, a small insertion of sustainable development can be seen in the subject. It is due mainly to their personal household management, providing daily living needs, self-provision, taking care/thinking about tomorrow (Lice, 2003).

Home economics and technologies is a specific subject at school. It is connected with a high practical prevalence. Its ways are very different, considering the students' age group. Already in the younger classes students learn to use economically a variety of materials – paper, cardboard, fabric, yarn, thread etc. When preparing the items using different technologies, students gain a concept of the extraction, processing of the material and its compliance with the requirements. When purchasing the necessary materials and products in the store, students get to know consumer philosophy, such concepts as price, packaging, label, warranty, quality etc. get more relevant. Students see the development of different aspects of life through practical work. Students obtain comprehension about the essence of the sustainable development.

Today acquisition of education for sustainable development is emphasised together with the human free willingness, choice and understanding. In home economics, the understanding of the student about the safety and quality conditions of the human living environment, the ability to creatively involve and

solve problems related to that, the ability to gain experience in creative activity is emphasized (Lice, 2012).

Based on the previously mentioned theoretical approaches and education view is called the aim of the research - to clarify students' understanding and preparedness for sustainable development. The used methods: questionnaires, discussion and observation

Methodology

The scientific research was carried out in Jelgava Elementary School No 4 (Latvia) during autumn time 2014. 140 students aged 11-12 were invited to participate in this research. The research was done within Home Economics and technologies lessons. Different research methods such as: questionnaire, discussion and observations were used in the current investigation. The results have been summarized and the relevant ones are presented graphically using calculations of percentage. The pedagogical research was focused on the aspects of education for sustainable development, sustainable consumptions, social innovation and sustainable lifestyles.

Nowadays a pupil lives and learns in the environment full of information. He receives background materials not only at school but also from the press, multimedia, advertising, different kind of movies, and the internet. He has to perceive it systematically, to filter it through his thoughts and to distinguish its quality. Information and communication technologies provide possibilities to acquire and also share personal information fast. Numerous media promotes a more rapid communication. A mobile phone is an indispensable tool in the hands of a pupil.

A discussion is an effective method in the concept of understanding and problem-solving skill development. It allows students to work more and get a feedback. The main objective of discussions is to promote critical thinking skills, democratic participation skills and other cognitive abilities and skills. Discussions are public. During a discussion students strengthen their ability/skill to express themselves, to justify their point of view. They are forced to evaluate their own and others' point of view, to substantiate it with facts and logic (Gage, Berliner, 1998).

The carried out observation was planned, long-term, it took place in a natural environment. The students' behaviour during the discussions and surveys was observed during the research. Their emotions, activity, communication, expression of ideas, respect for the mate, ability to listen to other. Observation is one of the empirical data obtaining methods. It allows understanding the nuances and meaning of a human's action. A human with his will, feelings, energetic and desiring to know is in the centre of the observations (Kristapsone, 2008).

A survey is the method of collecting information in which is due to ask the investigational group oral or written questions and to carry out statistical processing of the obtained data. The situations and circumstances have a great role in the process of a survey (Kristapsone, 2008). Six questions were included in the research questionnaire. There are questions where students choose from the given answers: yes, partially, little, no, or give a free answer. When answering these questions students give self-evaluation in a hidden form.

Results and discussion

The students showed an interest in the chosen discussions topics. The discussion topics were chosen by students themselves. Each student applied for his/her selection. They were combined in groups. The main discussion topics: preservation of nature, municipal waste, household chemicals, natural disasters, climate changes. They shared their impressions of participation in various joint works to tidy the natural spot. Many have participated in forest planting. They are worried about deforestation, river embankment littering, wrong choice of a fire place. Several students have the trees planted by their grandfathers and fathers still growing at their houses.

Thoughts about sorting the waste were different. Everyone supported it, understands the need, however does not always do it every day. Some students have observed that the waste collection from large containers in the city is ambiguous. Separately intended containers are put together in the same car. Thus, it makes no sense to sort the waste in households. Students have heard about the waste

sorting problems at a national level on television, mainly about working regulation adherence in large waste dumping grounds. However, overall, students admit that the waste sorting process in the country and in the city.

Students see the household chemistry problems firstly through household cleaning and grooming tools. They discussed the eco-products which are not dangerous to the environment and the natural cleaning products, for example, the use of soda and salt.

Students have heard about the major natural disasters from the mass media, the internet and books. In their own practice they have seen the flood when the rivers exit from the banks and the meadows, valleys and households are flooded. In recent years residential houses also in cities, for example, Ogre have been flooded. Its reasons were discussed – the unity of natural objects, the people's superficial attitude towards their responsibilities. Some students have seen how water fills their home basements and backyards. They have helped in rescuing – brought things out of the cellar, drawn water with buckets, got to know the water pump. The idea of a human's powerlessness in front of the natural disasters was declared. However, it is necessary to think about the consequences that may result from inadequate human action, thinking narrowly only from one point of view.

Students have heard a lot about the consequences which climate change does to animals, such as polar bears and penguins. Also in their neighbourhood they have observed the specific behaviour of wild animals. There are different points of view, as to why now the four seasons are changing their traditional expressions. It can be seen that spring plants begin to sprout already in winter periods when there is not any snow.

The discussions went smoothly, according to the development level of their age. During the discussions the students were open, impulsive, sometimes did not listen to what their fellows said, however, politely and unconstrained. No one imposed his/her own thoughts/beliefs on others, but tried to convince. Everyone wanted to speak more and more often. The thoughts said by a fellow gave an impulse for one's new narrative. It was possible to observe that students in their stories first emphasized real events around them, their environment/surroundings. Then constructing their thoughts further, moved forward to a more global perspective. Students had their own belief in sustainable development.

The questionnaire was carried out after discussions. The question (1) *Do you understand „sustainable development"*? was included in the questionnaire. The result show, that 80% of the students understand the main directions of sustainable development. 15% - partially, but 5% - a little. Analysing the data can see, that they are students who didn't take part in discussions. Nobody indicate no (Figure 1).

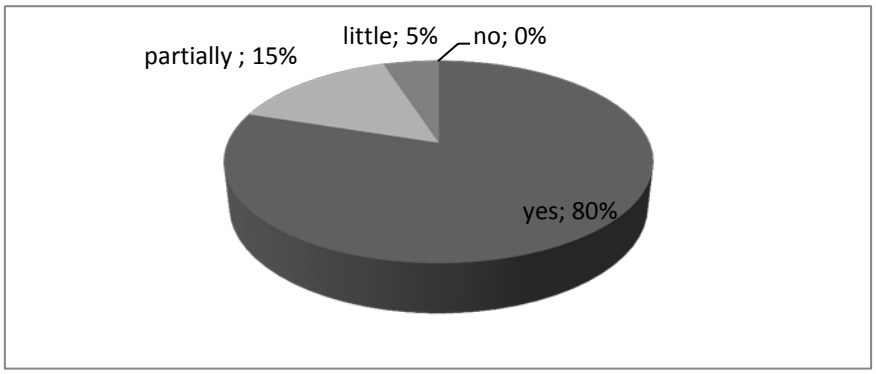

Figure 1. Students understanding about „sustainable development".

The question (2) *Do you feel secure about the future?* also raised interesting discussions. The students talked about their personal feelings, beliefs and views. According to the survey data, 35% of the students feel safety, 43% feel partially, bet 18%- a little and 4% feel unsafe.

All students support material recycling. The answer to the question (3) *Do you support material recycling?* testify to this fact. 84% of the students indicate that support and 16% - partially. Nobody note answers – a little or no.

They were amazed at the question (4) *Do you like to write on the paper, what is made from recycling materials?* They had not been through about it before 46% like to write on that kind of paper. 35% - partially, but 19% - a little. Nobody note answer – no.

Clear answers were to the question *(5) What present could you make from recycling materials?*. The students understood essence of question and named concrete objects, such as: different kind of bangles, boxes, wallets, small bags, cups, vases, container for pencils, pencil-cases, tie, flowerpot.

The question (6) *Have you thought about your personal action for sustainable development?* asked the students to think about yours real actions in everyday life (Figure 2).

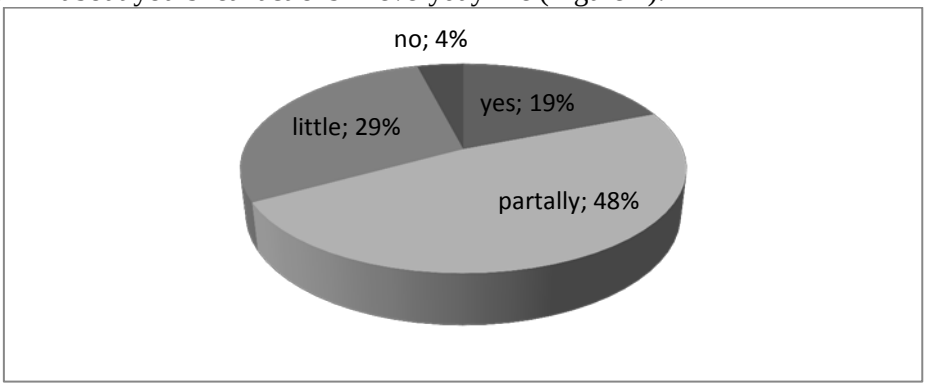

Figure 2. Students thoughts about personal action for sustainable development.

The data shows that main part of pointed answer - 67% (19% and 48%) of students has thought about personal action for sustainable development. It could be seen at discussions. The students' answers were true and open. 29% of students have thought a little, but 4% - hasn't thought. Some students made comments: we do some actions without thinking in everyday life; we do it automatically. It shows some activities are become as habit.

Conclusions

- Due to the scientific and technical progress the activities of a human being nowadays has become the factor that forms the surrounding environment. To a great extent the activities of human beings can threaten their own survival.
- A human being cannot only benefit from natural recourses, but also can improve utilization methods.
- The education for sustainable development is the education which promotes the opportunities of every individual to obtain knowledge, values and skills which are necessary for the decision making about the individual or collective activities to improve the quality of life at this moment, not causing the threats to the necessities of the next generations.
- Home economics and technologies is one of the subject were education for sustainable development is carried out as an interrelated subject link. It is integrated in the content corresponding to the level of education.
- The students showed an interest in the chosen discussions topics. The main discussion topics: preservation of nature, municipal waste, household chemicals, natural disasters, climate changes. During the discussions the students were open, impulsive, sometimes did not listen to what their fellows said. Students had their own comprehension in sustainable development.
- The research data show that 80% of the students understand the main directions of sustainable development. 35% of the students feel safety and 43% feel partially. All students support or partially support material recycling, accordingly 84% and 16% of the students. 46% like and 35% partially like to write on the paper, what is made from recycling materials. All students named concrete objects as presents made from recycling materials. 67% of students have thought about personal action for sustainable development.

Bibliography

1. Dislere V. (2012). Methodology Structure for Training Teachers of Home Economics and Technologies. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality (REEP*), Volume 5, Latvia University of Agriculture, Jelgava, Latvia, pp.201-208.
2. Gage N.L., Berliner D.C. (1998). *Educational psychology*. Houghton Mifflin, Boston, USA.
3. Kalniņa D. (2007). *Iepako, izpakounkotālāk* (Be packed, unpacked and what's next), RaKa, Rīga, Latvia, 159 lpp.[online] [20.12.2014.]. Available at http://www.zalais.lv/lv/iedzivotajiem/e-biblioteka/izglitibas_materiali/macibu-lidzeklis-iepako-izpako-un-talak/(in Latvian)
4. Kļaviņš M. (2012).*Vides piesārņojums un tā iedarbība* (Environmental pollution and its effects). Latvijas Universitāte, Rīga, Latvia, 191 lpp. (in Latvian)
5. Kristapsone S. (2008). *Zinātniskā pētniecība studiju procesā* (Scientific research in the study process). Turība, Rīga, Latvia, 352 lpp. (in Latvian)
6. Lice I. (2003). Historical development of the subject *Home Economics* at general education schools in Latvia. Proceedings of the international scientific conference *Rural Environment Education Personality (REEP*), Latvia University of Agriculture, Jelgava, Latvia, pp.126-131.
7. Lice I. (2012). Change of Direction of Home Economics Subject. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality (REEP*), Volume 5, Latvia University of Agriculture, Jelgava, Latvia, pp.247-248.
8. Mandolini K. (2007). Conditions, processes, and aims of the teacher education: a philosophical perspective.*Journal of Teacher Education for Sustainability*, Volume 7, pp. 5-13.
9. McKeown R. (2002). *Education for Sustainable Development*. Toolkit, Version 2. [online] [20.12.2014.]. Available at http://www.esdtoolkit.org/esd_toolkit_v2.pdf
10. *Nacionālais vides politikas plāns 2004.-2008.* (2004).(National Planof Environmental Policy 2004.-2008).MK rīkojumsNr. 81 (MC order nr. 81),Vides aizsardzības un reģionālās attīstības ministrija (Ministry of Environmental Protection and Regional Development of the Republic of Latvia). [online] [20.12.2014.]. Available athttp://likumi.lv/doc.php?id=84021 (in Latvian)
11. *Noteikumi par pamatizglītības standartu, pamatizglītības mācību priekšmetu standartiem un pamatizglītības programmu paraugiem* (2014). (Regulations on the state standard of basic education, standards of basic subject and curriculum of basic programmes). MK noteikumi Nr.468. (Regulations of Ministry Nr.468)[online] [20.01.2015.]. Available at http://likumi.lv/doc.php?id=268342 (in Latvian)
12. Pelnēna M., Kļaviņš M. (2009). The Concept of Evaluation of Education For Sustainable Development. *Environmental Education at Universities* (ed.Kļaviņš, Zaļoksnis). LU, Riga, Latvia, pp.69-83.
13. Petere A. (2013). Developing pupils' cultural competences during integrated studies in multicultural environment of primary school. Proceedings of the international scientific conference *Rural Environment Education Personality (REEP*), Volume 6. Latvia University of Agriculture, Jelgava, Latvia, pp. 241-247.
14. Report of the World Commission on Environment and Development: Our Common Future(1987).United Nations Documents. [online] [20.01.2015.]. Available athttp://www.un-documents.net/wced-ocf.htm
15. Rompczyk E. (2007). Gribam ilgtspējīgu attīstību (We want sustainable development). Aģentūra DUE, Riga, Latvia, 152 lpp. [online] [20.12.2014.]. Available at: http://www.varam.gov.lv/files/text/darb_jomas//book_gribamia.pdf (in Latvian)
16. Sustainable Development Strategy of Latvia until 2030 (2010). Saeima of the Republic of Latvia. [online] [20.12.2014.]. Available athttp://www.varam.gov.lv/lat/pol/ppd/?doc=13857
17. *Vides aizsardzības likums* (2013). (Law on Environmental Protection). [online] [20.12.2014.]. Available athttp://likumi.lv/doc.php?id=147917 (in Latvian)
18. Zaļoksnis J. (2009). Environment Education and Education for Sustainable Development in Policies and at Universities. *Environmental Education at Universities* (ed.Kļaviņš, Zaļoksnis). LU, Riga, Latvia, pp.105-126.

Ideas of the Reform Pedagogy in the Manual Training Lessons

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Abstract: Target of the paper is to bring out the importance of reform pedagogy, especially ideas of the work school in development of the household and manual training lessons in Latvia. At the end of 19th century the school opened for all things new, experiential, and experimental. General term *reform pedagogy* was applied to the different new directions that boomed in the first third of 20th century. Most popular direction of the reform pedagogy is the *work school*, whose theoretical founder is considered to be John Dewey.At the end of 19th century the idea on the importance of manual training in the education gained wide popularity, important educators in this field were Uno Cygnaeus, Adolf Klausson Kaas, Otto Salomon and Gustav Adolf Salisis; their educational activity is described in the paper.Thanks to their works and practical experience in teacher education, the manual training was included in the curricula of schools almost in the whole world.The paper characterizes understanding and practical implementation of the work school ideas of the main representatives or the reform pedagogy John Dewey, Georg Kerchensteiner and Hugo Gaudig. It explores the directions of the work school – manualism, professionalism, activism – and educational ideas and activity of its main representatives.Special emphasis is put on activity of the manualists which facilitated emergence of the subject in schools and its further development. The paper analyzes cognitions of KarlisCirulis on the importance of manual training in the development of harmonic personality. Method of research was hermeneutics, by means of which an analysis of the sources and literature on the history of pedagogy was persformed.

Keywords: manual training, work school, manualism, school education.

Introduction

Target of the paper is to bring out the importance of reform pedagogy, especially ideas of the work school in development of the household and manual training lessons in Latvia.

Research *Ideas of the Reform Pedagogy in the Manual Training Lessons* was performed within the framework of the research *Historical Development of the Household and Manual Training Lessons in Latvia until 1940.*

At the end of 19th century was actualized a question on what the *new school* should be like. The most characteristic traits of the *old school* were learning only from books, mechanical learning without understanding and connecting of knowledge with real life, as well as strictly established relationship between students and teachers.

Lots of new and experimental things were introduced in the school. Several new ideas emerged, such as *The Century of the Child* (*Ellen Key*, 1849–1926); *Self-learning* (*Berthold Otto*, 1859–1933); *Work school* (*Georg Kerschensteiner*, 1854–1932, *Hugo Gaudig*, 1860–1923); *Political school reform concepts* (*Pavel Blonskij*, 1884–1941); *Art education movement*(*Alfred Lichtwark*, 1852–1914); *Country boarding school movement* (*Hermann Lietz*, 1868–1919) etc. General term *reform pedagogy* was applied to the different new directions that boomed in the first third of 20th century. As pointed by prof. Iveta Kestere, the main emphasis in this social movement was put on the democratization witihn the time frame from 1890s until 1930s (Ķestere, 2005, 76). Reform pedagogy simultaneously rouses in several European countries, but its ideological centre was in Germany. One of the most popular directions of the reform pedagogy is the *work school*.

Author of the idea of work school is John Dewey (1859–1952), his calling was to *learn by means of doing*. J. Dewey believed that only teaching by means of doing can draw children closer to the life, therefore students have to become familiar with different types of work, but this work cannot have an economical character. Work school encompasses the gaining of knowledge; it is the aim of the upbringing and makes education more understandable and practical. Idea on connection of action,

theory and practice as the main means of gaining knowledge comprised the foundation of work school and other reform pedagogy theories (Djui, 1925). If an opportunity is created for a child to act, he develops his inventor instincts. Child has to be in the center of educational process. Child has to act, and the task of the school is to provide an appropriate guidance. By means of purposeful activities and consulting with teacher the student learns to think. J. Dewey (Dz. Djui) considers that thought is only that which is understood by the student personally and not that he repeats from the book (Djui, 1925).

With the formation of state of Latvia in 1918 began a period of change in the Latvian education system. It was encouraged by the Education Law of 1919 which opened up new ways for creation of the national school. Big attention was paid to acquiring of the progressive foreign educational experience. Latvian teachers had an opportunity to visit Germany, Belgium, France, Italy, England, and Sweden to visit schools and participate in conferences. Acquired experience and pedagogical cognitions were reflected in periodicals like *Monthly Magazine of the Ministry of Education* (*Izglītības Ministrijas Mēnešraksts*), *Educator* (*Audzinātājs*), *House and School* (*Māja un Skola*), *Our Future* (*Mūsu Nākotne*) and others. Books on pedgogical issues were also published. A special event in development of the Latvian pedagogical thought was an international exibition on education which took place in Rigain 1924. Progressive pedagogical ideas were introduced to the teachers in seminaries and courses organized not only by the Ministry of Education, but also by the newly established Professional teacher organizations (Latvian National Union of Teachers (*Latvijas nacionālā skolotāju savienība),* Latvian Teacher Union *(Latvijas skolotāju savienība)*).

Under the influence of new idejas a new group of teachers-experimenters was established, they began to call themselves the teachers-tryers. Their target was to adapt the new ideas to the Latvian circumstances. Work schools in Latvia were promoted by Karlis Dekens, Eduards Petersons, Janis Broka, Mikelis Shtals. Work school directions during 1920s-1930s were analyzed by Aleksandrs Dauge, Krists Obshteins, Cezars Sergis, Martins Celms.

Methodology

Methodological foundation of the research is created by the regularities verified within the pedagogical science on the necessity of evaluation of the pedagogical heritage of the past for understanding of the modern problems, on personalities (pedagogists) as the force influencing the curricula, on the meaning of the manual training in the process of development of harmonic personality and securing of the lifelong quality of life.

Theoretical foundations of the research are created by the research on reformpedagogy, emphasizing work school idejas as the theoretical foundation of the manual training (J. Dewey (Dž.Djui), G. Kerschensteiner, H. Gaudig, R. Seidel (R.Zeidels), K. Cirulis (Цируль К.)).

Research method is hermeneutics that was used to analyze the sources and literature on the history of pedagogy. Hermeneutical method was used where the target of the researcher of the history of pedagogy is to understand historical text and interpret it in his research. In the modern era the orientation of hermeneutics to understand of text is being used increasingly often. The research used the cognition of hermeneutics that understanding of text is means of reaching specific understanding. Hermeneutics turns to the essence of understanding, the the object to be interpreted in its historical, sociocultural context. It emphasizes the meaning of the historical tradition in the modern culture.

Results and discussion

Meaning of the manual training in the development of harmonical personality

Analyzing the most famous works of educators it can be concluded that they paid attention not only to the work education, but also to the manual training, thus justifying that this subject should be taught in schools and recommending them as very necessary and important means of education. Within the framework of the work school Karlis Cirulis (1857–1924) also analyzes the experience accumulated during the previous centuries that indicates that even before the reformpedagogy one can find cognitions on the importance of the manual training in development of harmonic personality. For example, Jan Amos Komenský (1592–1670) widened contents of curricula for folk schools, including

the manual training among other new subjects. Jean Jacques Rousseau (1712–1778) urged people to study the crafts, adding that we have to teach not just workers, but people. French enlightener saw independence in the craftsmanship, indicating that a craftsman depends only on his own work. K. Cirulis quotes Johann Heinrich Pestalozzi (1746–1827): "It is perhaps the most horrible gift given to the mankind by the evil spirit: knowledge without dexterity and opinions without perseverance and ability to overcome" (Cīrulis, 1887, 2).

Research of K. Cirulis show that ideas of J. H. Pestalozzi were further developed by the German pedagogist Friedrich Wilhelm August Fröbel (1782–1852): "Considering the incessant pursuit of action characteristic to the all children, all children incessantly pursuit the creation, especially the creation of tangible things that they can prepare by their own hands. So children playfully try the trade of applied arts and crafts; they draw, they cut wood, they build, and only unwillingly they stop doing what they have started, only if they fail many times" (Cīrulis, 1887, 2). Evaluating beliefs of Kristian Gottfield Salcmann (1744–1813) K. Cirulis quotes him: "Independent creation of different toys in the beginning and later of really useful tools and things is such a suitable and likeable pastime that I believe it is necessary in all schools where children are properly raised. A man that has not accustomed his hands to the versatile dexterity is just half a man, because he is always dependant on other people" (Cīrulis, 1887, 2).

Realization of the work school principles was also determined by the cognitions of psychologists. A special attention to the development of will was paid by the German psychologist Wilhelm Maximilian Wundt (1832–1920). W. Wundt divides all will-related activities in the outer ones that create real changes in the outside world, and the inner ones that have to do with the inner, spiritual activity. It corresponds to the beliefs of representatives of the work school who indicated that it is necessary to develop the will not just in its outer expression by means of manual training and physical activities but on its inner side which means spiritual activities and acquiring of knowledge by means of self learning (Hergets, 1927, 53).

Morally pedagogical importance of the manual training was emphasized by the Felix Adler (1851-1933), the founder of the New York Society of Ethical Culture. One-sided intellectual activity does not develop connections between thought and activity centres in the brain, this development happens during meticulous manual activity.

German psychologist William Stern (1871–1938) indicates the importance of spontaneous actions ir development of personality, spontaneity being understood as the outer expression of person`s inner powers. Feelings, thoughts and beliefs are also a material of spontaneous activity. One of the targets of the work school is cultivation of spontaneity (Herget, 1927, 55).

Summarizing the main cognitions of famous educators and results of this research on the importance of the manual training in the development of personality, it can be concluded that manual training:

- develops manual dexterity, flexibility of fingers, tactile sensations. But manual dexterity is followed by the dexterity of mind;
- develops observational and comparative abilities, vision, estimation by sight, feel of forms, comprehension of the color harmony and general esthetic taste;
- develops attention, memory, accustomes one to thinking, develops ingenuity, acuteness, practical approach, austerity;
- will give joy of work and belief in oneself, as well as accustoms one to the independent creative activity;
- accustoms one to the cleanliness, tidiness, patience;
- satisfies children`s disposition to constant movement and activity;
- accustoms one to the discipline;
- prepares one for the practical life.

Directions of the work school

Directions of the work school are not separated from other directions of pedagogy, but they are linked to the art pedagogy, pedagogy of personality, activity, and experimental pedagogy. Many promoters of the art pedagogy became promoters of the work school principles, because there they found affimation

of their aspirations. Analysis of literature confirms that both directions are fundamentally concordant and supplement each other. As emphasized by Anton Herget (1875-1944), idea of the work school is just more comprehensive and, correctly interpreted, alsoincludes principles of the art education (Herget, 1927).

Swiss educator Robert Seidel (1850–1933) in the beginning of 20th century stresses three main directions of the work school. Aim of representatives of the first direction is to develop vocational abilities, to prepare well educated craftsmen, thus promoting domestic industry. It can be concluded that motives are economic and without pedagogical orientation. A representative of the second direction poses development of the manual rechnique, love of work and understanding of the practical life as their main goal. Emphasis is put on the formal education; therefore work school is associated with theoretical explanations. Even though both abovementioned directions were criticized, it can not be denied that both of them are trying to find a closer link between school and life and posed aims are legitimate. Third direction that is also represented by R. Seidel views manual training as means of harmonic education, promoting physical and emotional education. It has to be added that representatives of this direction did not exclude development of the manual technique, preparation for the practical life, but that wasn`t the main goal of the work school (Zeidels, 1930, 12).

German educator HerbertGudjonindicates that work school movement was organized in two directions. One direction was mainly represented by professor Georg Kerschensteiner (1854-1932), Munich city school counselor, but the other was leaded by German educator Hugo Gaudig (1860–1923), under whose guidance worked Otto Scheibner (1877–1961) (Gudjons, 2007, 113).

Latvian educators Alfreds Staris (1916–2013), Vladimirs Usinsh (1918–2001), and Janis Anspaks indicate that in the beginning of 20th century in Latvia thee main work school directions are seen:

- manualism, founded by Uno Cigneuss (1810–1887), Otto Aron Salomon (1849–1907), Aksels Mikkelsen (1849–1929), Gustav Adolf Salisis (1818–1890), and Karl Sent-Ilera (1834–1901). Manualism is also represented by R.Seidel, Emil von Schenkendorff (1837–1915), Alwin Pabst (1856–1918) and K.Cirulis;
- professionalism, mainly represented by G. Kerschensteiner;
- activism, where alongside with its main representative H. Gaudig representatives of different pedagogical theories are mentioned, such as Heinrich Scharellmann, Augusts Lajs, J. Dewey, and others (Anspaks, 2003; Staris, Ūsiņš, 2000).

Prof. J. Anspaks believes that one of the brightest expressions of the work school in Latvia was **manualism**.Pedagogical activities and ideas of beginners of the manualism in Latvia almost are not analyzed at all. At the end of 19th century research was done by K. Cirulis, reflecting them in the book *Manual Work in the Comprehensive School* (*Ручной трудъ въ общеобразовательной школе.*) (Цируль, 1894). As shown by the research of K. Cirulis, thanks to the works and practical experience with the preparation of teachers of U. Cigneus, Jens Adolph Frederik Clauson-Kaas (1826–1906), O. Salamon and G. A. Salisis, manual training was included in curricula of almost all state schools.

Main task of representatives of different directions of manualism was to introduce the manual training in schools as a separate subject. Skills of work acquired by children during manual training lessons can be also used during other lessons. Thus manual training is simultaneously both a separate subject and principle of learning. Manualists believed that walls that separate physical and intellectual work should be taken down, workers of these fields should not feel separated. R. Seidel, O.Salomon, and K. Cirulis stressed that overcoming of these contradictions necessitate changes in the educational work in the school, widening opportunities for implementation of work school ideas in practice. R. Seidel, just as K. Cirulisand other methodologists indicate that manual training corresponds with child`s natural disposition towards movement and activity (Zeidels, 1926). U. Cigneus also believed that in the school equal attention should be paid both to the intellectual and physical education. Educator indicates that school`s orientation should be practical, but educational approach – developmental and educational, the same goes for the manual training. K. Cirulis indicates that one-sided intellectual work dulls pupil`s abilities of perception and creates intellectual exhaustion. Similar to K. Ushinsky, K. Cirulisalso recognized that it would be best if a person would have to perform both physical and intellectual work.

Prof. J. Anspak indicates that K. Cirulis believed that work is an important factor in education of children, recognizing that only during the process of work person`s abilities and talents are discovered, noble moral qualities are developed. But idleness furthers physical, moral and intellectual degradation of personality, therefore since the very childhood child has to be engaged in the work that corresponds to their abilities (Anspaks, 1957, 74–81). Educational importance of the manual training was also emphasized by O. Salomon. Manual training system created by him has several goals: to avaken in pupils the pleasure and love of work; to familiarize them with general skills of manual work; to strenghthen their independence; to instill orderliness and precision; to develop attention, diligence and perseverance. Education of students should be started not by separate exercises that prepare them for specific work operations, but by specific tasks that follow each other in progressive levels of difficulty so that they could feel the results of their work (Цируль, 1894). U. Cigneus stressed that the goal of the manual wotk is not acquiring of the craft, but learning of skills that are common in many trades, that develop children`s habit of and love for the work in general (Цируль, 1894).

K. Cirulis recognized that the process of work has a high cognitive value. Based on views of the most distinguished representatives of the field of education (J. A. Komensky, J. J. Russeau) on this issue, K. Cirulis emphasized the huge importance of the sensual perception. Acquired individual experience gives rich material for activity of the mind – for comparing, drawing conclusions and making opinions. Educator thinks that development of student`s cognitive process, sensual perception and will could be facilitated by correctly used visual materials that still are underestimated in the folk schools. But this problem could be partially solved by introduction of manual training in the school (Anspaks, 1957).

One of the most important allusions of K. Cirulis is connected with necessity to diversify lessons to increase capacity of pupil`s work. He believes that uniform work dulls children`s nervous system, makes them feeble and indifferent, suppresses their natural curiosity. But if the types of work are diversified, it is possible to gain much better results (Cīrulis, 1879). It has to be added that K. Ushinskis also recognized that after intellectual efforts the physical work is not just pleasurable but also useful relaxation.

K. Cirulis placed a demand to bring teaching of different school subjects closer to the practical life and to choose active methods of teaching. According to him, pedagogy also has to further implementation of life`s demands. K. Cirulis indicates that teacher has to consider pupil`s innate abilities and capacities that are undeniably important both in development of personality and in choice of future profession (Cīrulis, 1887, 2). K. Ciruli`s thoughts on this issue fully conform to J. J.Russeau`s demands for active teaching methods, paing attention to children`s age, mentoring and cloce connection between education and life.

Representatives of manualism indicate that manual work corresponds to the nature of human psyche. R. Seidel expresses a view that manual work especially well develops the spirit, because if it is correctly organized, it demands a lot of movement, and all this movement is directed towards all that ir beautiful, true and good (Zeidels, 1926, 20).

Main goal of the **professionalism** and its main representative G. Kerschencteiner for the work school was facilitating of vocational training and civil education. G. Kerschensteiner also viewed manual training both as a subject and educational principle. G. Kerschensteiner denied learning only from books and supported student`s manual work and independent intellectual work. Educator believes that manual training unite many important principles of pedagogy – independent, practical and intellectual activity, learning from practice, self-control of one`s own accomplishments, and not grades, practice and knowledge of speciality that are not connected with reality;such ethical goals as accuracy, frugality and learning by means of cooperation, etc. (Kerschensteiner, 1959). G. Kerschensteinercreated workshops in the schools, more closely conncted school and profession, considering J. Dewie`s beliefs, he amphasized thinking connected with activity (Gudjons, 2007). Work that is offered in school has to be real, common, it has to stimulate development of positive traits of character – independence, cooperation, experience, self-education. Educator proposed to arrange the schools accordingly to the active operation – to arrange gardens, workshops and cabinets. New educational plans were developes, theory and practice of the professional education was worked out

(Marsone, Ķestere, 2010). G. Kerschensteiner developed the idea of the work school in close solidarity with the raising of quality of the general education and quality of education. Analizing activity of G. Kerschenshteiner prof. Leonards Zhukovs indicates that G. Kerschensteiner put forward three goals for the folk school:

- to help the student to learn his vocation;
- to develop student`s understanding on the public importance of any craft;
- to promote student`s belief that he with his own work is giving investment in the moral development of the nation (Žukovs, 1999. 206).

View of G. Kerschenshteiner corresponds with beliefs of representatives of manualism that students should not be engaged only in intellectual development, alongside they have to be engaged in physical activities as well. Thus the practical meaning of knowledge is understood and skills to use this knowledge in life are created, as well as the will is developed. One of the methods for training the will is correctly guided education with work. It begins with imitation of grown-up`s activities.

The book *Concept of the Work School* explains the essence of the work school, emphasizing that it is such school that unleash mental energy collected in the culture with its methods and all its system (Kerschensteiner, 1959, 180). Not all crafts or manual work corresponds to the work school idea. Manual work corresponds to the work school idea only if it is viewed and systematically used for development of the will and thinking, for strengthening of nation`s readiness to work. Teaching of work in folk school will have good results if the manual training will be viewed both as a separate subject and teaching principle. G. Kerschensteiner believed that practically inclined person will find his way to the science, art and social values only through technical work. In the school one has to develop skills and abilities to precisely perform any activity. Then student develops his will, intellect, fineness of feelings, precision, willful atteintion, and esthetic taste.

G. Kerschensteiner conceded an idea that a school in which there is no manual work as such can also be considered a work school. Local educational institutions should become such schools. There methods of the educational process should be made more active developing skills and acquirements of students (Kerschensteiner, 1959).

Representatives of the **activism** understood the meaning of the work school as expression of any activity and student`s own action during learning. Cognitions of Hugo Gaudig were quite widely popular. He developed *theory of the free mental activity*. In Leipcig under his leadership work school movement was organized by L. Miller and O.Scheibnes. They developed several practical methods for any lesson that should promote students` independent work with the given topic. H. Gaudig interpreted the work school differently than its other representatives. Analysing H. Gaudig`s pedagogical activity researchers of the history of pedagogy I. Kestere and Stanislava Marsone indicate that he emphasized formation of student`s personality during the pedagogical process, recognized students` independent work during learning, work with the given topic. His ideas form basis for the modern group work and project method (Marsone, Ķestere, 2010). He acknowledged manual work, but didn`t see in it characteristics that would comply with the work school. He stressed that clearly mental activity is a work process in full meaning of this word. He stressed individual education of personality. Goal of H. Gaudig was to create personality understanding by that mentally independent, critical person with many-sided abilities (Gaudig, 1969).

Criticizing schools of his time, H. Gaudig writes that in the school teacher with his actions very often prohibit student`s independent activity. He believes that work school is implemtation of the independent activity in it. Actually H. Gaudig is the founder of the personality pedagogy. Goal of the education is development of independently thinking minds. Main didactic principle ir independent action and activity of students, understanding that as ability to set a goal independently, to choose means and pace of action, to plan the action during specific situation, to control one`s actions, to correct it, to experience results of one`s own work. Students have to be prepared for further self-education. He believed that the highest meaning of education is development of the independent mental activity. H. Gaudig was sure that the most comprehensive concept in the school is the *culture*. Based on that personality should be build. Free mental action is independent activity which takes part due to student`s own inducement, abilities, his chosen path and freely chosen goals (Gaudig, 1969).

Introduction of the manual training in the European schools

Idea of the manual training as a comprehensive school subject and first serious attempts to implement it in practice comes from Finland. General inspector of Finland`s folk schoolsU. Cigneus was the first to include manual training in the school curricula, emphasizing its educational character. In 1866 manual training were implemented as compulsory subject in Finninsh folk schools (Цируль, 1894). A. Klausson-Kaas has to be thanked for the fact that teaching of the manual training was started in Denmark, Germany, southern parts of Sweden and also in Baltics. A. Klausson-Kaaswas the first to organize courses for teachers of the manual training. He believed that during the courses teachers change their notion of this subject and its place in the school system. During the courses teachers gained confidence about the educational role of the manual training. Alongside theoretical subjects he created a special technical study course with methodical works in the school workshops. After A. Klausson-Kaas`s suggestion in 1877 in Terbata Estonians established a special society for refinement of the manual training. In 1878 work school courses were organized in Terbata, but in 1879 also in Kuldiga, where he read a lecture course on the manual training teaching problems in the comprehensive school and presented basic issues of teaching of manual training developed by him. Around 40 teachers participated in the courses. A. Klausson-Kaasintroduced participants of the courses with crafts of carpenter, book-binder, woodcarver, basketry weaver etc. It has to be noted though that later K. Cirulis indicated that superficial introduction of the abovementioned fields negatively impacted teaching of the manual training in Latvian schools (Цируль, 1894). But in Denmark in 1886 a Manual Training Society was formed, with that pedagogical manual training startedto be introduced in the school. Movement was initiated by A. Mikkelsen who created courses for the manual training teachers where teachers from whole Europe participated. A. Mikkelsen has also created manual training atlas that has been very important in teaching of the manual training (Цируль, 1894). Swedish manual work teaching system was created by ir O. A. Salamon. At the beginning of his pedagogical activity he established trade school for boys and manual training school for girls that later morphed in teachers` seminary. His most notable work is *Handbook for Teachers of the Home Trade* (1890) that is translated in several languages (Цируль, 1894). In France G. A. Salisis was very active. In 1882 when French Parliament developes new law on the folk schools, resistance of the Senate notwithstanding, included manual training among compulsory subjects and also in the teachers` seminaries. G. A. Salisis became the first French school inspector in the issues of the manual training. In 1882 in Paris teachers` seminary was established that prepared 72 manual training teachers during 2 years time, after that the seminary was closed (Цируль, 1894).

In Germany manual work as the school subject was promoted by the German Society for promotion of manual training for boys that was created in 1881. From 1892 the society was lead by E. Shenkendorph who owns big credit for creation of boys` manual training. Under this society boys` manual training seminary operated in Leipzig, where manual training teachers were being prepared. Until 1913 seminary was lead by A.Pabst who promoted introduction of the manual training in schools with his readings and articles (Herget, 1927). A. Pabsts emphasizes meaning of the manual work as means of the physical and mental development, less thinking on its practical meaning and necessity for life. In teachers` conference in Germany in 1908 rules were developed according to which German folk school plans should be changed based on the work school principles. In 1911 the first draft of the new teaching plan was issued, but in 1915 – the second edition with corrections. It was the first official German folk school teaching plan that was based on the work school principles (Herget, 1927).

Latvian educationalist K. Cirulis created and introduced a special manual training system applying the experience of European and Scandinavian schools to the Latvian and Russian schools.

Conclusions

Examining importance of the ideas of reformpedagogy in development of the manual training, following conclusions were drawn:

- In the beginning of 20th century in Latvia three main work school directions can be seen – manualism, professionalism, and activism. Directions of the works chool cannot be strictly

separated from each other; they are also connected with other directions of pedagogy, especially with the art pedagogy.

- One of its brightest expressions was manualism which in Latvia was represented by K. Cirulis. Main goal of representatives of the manualism was to introduce manual training in the schools as a separate school subject.
- Manual training is both a separate subject and teaching principle, because work skills that are learned by the students during lessons of manual training can be also used during other lessons.
- Manualists believe that the main goal of education is creation of a harmonic personality, by that understanding an education that equally corresponds to one`sphysical, psychical, social and moral nature.
- Thanks to K. Cirulis, experience of Europe and Scandinavian countries, especially pedagogical cognitions of manualists were also introduced in Latvia, later they can be seen also in works of other manual training methodists, for example, Aleksandrs Pantelejevs, Arvids Dzervitis and others.
- Ideas of the reform pedagogy, including idea softhe work school haven`t lost their urgency in modern days, because weare preoccupied by the same basic issues that were important to pedagogists back then, even though the historical situation is different.

Bibliography

1. Anspaks J. (2003). *Pedagoģijas idejas Latvijā* (Pedagogical Ideas in Latvia). Rīga, Raka, Latvia, 476 lpp. (In Latvian)
2. Anspaks J. (1957). Kārļa Cīruļa pedagoģiskais mantojums (Pedagogical Heritage of Karlis Cirulis). *Padomju Latvijas Skola* (School of Soviet Latvia), Nr.11, 74.–81. lpp. (In Latvian)
3. Cīrulis K. (1879). Mājrūpniecības svars vispārīgi un it īpaši audzināšanas ziņā (Importance of the Domestic Industry in General and Specifically in Education). *Baltijas Zemkopis* (Baltic Crop-Grower), Nr.44, 346. – 347. lpp. (In Latvian)
4. Cīrulis K. (1887). Rokdarbs kā vispārīgi attīstošs mācības priekšmets (Manual Trade as a Generally Developmental School Subject). *Dienas lapa* (The Day's page), Nr.168, 2.lpp. (In Latvian)
5. Djui Dž. (1925). *Skola un sabiedrība* (School and Society). Rīga, Izglītība, 53 lpp. (In Latvian)
6. Gaudig H. (1969). *Die Schule der Selbstätigkeit. Die Arbeits schuleals Reforms chule* (The School as Self-activity. The Work School as Reform School). Bad Heilbrunn: J. Klinkhardt, 25.–33. S.(In German)
7. Gudjons H. (2007). *Pedagoģijas pamatatziņas* (Basic Pedagogical Cognitions). Rīga, Zvaigzne ABC, Latvia, 113 lpp. (In Latvian)
8. Hergets A. (1927). *Galvenās strāvas tagadnes paidagoģiskajā dzīvē* (Main Tendencies of the Modern Pedagogical Life). Rīga, Rīts, Latvia, 184 lpp. (In Latvian)
9. Kerschensteiner G. (1959). *Begriff der Arbeits schule* (Concept of the Work School). München-Düsseldorf, Germany, 180 S. (In German)
10. Ķestere I. (2005) *Pedagoģijas vēsture: skola, skolotājs, skolēns* (History of Pedagogy: School, Teacher, Student). Rīga, Zvaigzne ABC, Latvia, 75.–76. lpp. (In Latvian)
11. Marsone M., Ķestere I. (2010). *Reformpedagoģijas attīstība Latvijā Eiropas reformpedagogu kustības kontekstā (20.gs. 20.–30. gadi)* (Development of the Reform Pedagogy in Latvia in Context of the European Reform Pedagogists` Movement (1920s-1930s)). No: *Pedagoģijas vēsture: 15 jautājumi* (History of pedagogy: 15 questions). Rīga, Raka, 126 lpp. (In Latvian)
12. Staris A., Ūsiņš V. (2000). *Izglītības un pedagoģijas zinātnes attīstība Latvijā pirmās brīvvalsts laikā* (Development of Education and Pedgogy Science During the First Latvian Free State).Rīga, Zinātne, Latvia, 167lpp. (In Latvian)
13. Zeidels R. (1930). *Darbaskola* (Work School). Rīga: Latvijas Skolotāju Savienība, Latvia, 110 lpp. (In Latvian)
14. Zeidels R. (1926). *Rokdarbi kā harmoniskas izglītības un audzināšanas pamats* (Manual Training as Basis for Harmonic Education and Upbringing). Rīga, Latvijas Skolotāju Savienība, Latvia, 20 lpp. (In Latvian)
15. Žukovs L. (1999). *Pedagoģijas vēsture. Pamatkurss* (History of Pedagogy. Basic Course). Rīga, Raka, Latvia, 206 lpp. (In Latvian)
16. Цируль К. (1894). *Ручной трудъ в общеобразовательной школе* (Manual Work in the Comprehensive School).С Петербургъ, Russia, 236 с. (In Russian)

Determinants of Dressing Patterns of Female Undergraduates Students in Tertiary Institutions in Abia State, Nigeria

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Abstract: The study investigated the determinants of dressing patterns of female undergraduate students in tertiary institutions in Abia State, Nigeria. A structured questionnaire comprising 4 point scale was the instrument used for data collection. A population of 29,595 of female undergraduates was obtained from the 4 tertiary institutions in Abia State. Sample sizes of 400 female undergraduate students were randomly selected for the study but only 393 subjects filled and returned their questionnaires. The data collected were statistically analyzed using frequency, percentages and mean. The findings of the study among others revealed that the female undergraduate students dressing patterns are greatly influenced by imitation of western dress styles, peer/social group pressure, Mass Media, imitation of film actresses, Fashion in vogue. The findings of the study also showed among others that female students were exposed to being raped/sexual harassments, the image of the students/family were being tarnished, students being addressed as prostitutes and irresponsible, stealing, exposure to deadly diseases e.g. HIV/Aids were the major effects on the students. The findings also revealed that decay in human standard, spread of diseases among others are the effects of indecent dressing patterns accepted by the students on the society. Based on the findings of this study, it was recommended among others that parents, churches, school authorities, lecturers, media houses etc, should make both individuals and joint effort to curb indecent dressing practices in the institutions of high leaning in the country. Programmes that sample opinions of Nigerians on Indecent Dressing should be regularly put in place for these groups of students. Through these ways, proper dress sense will be inculcated in the lives of these students.

Keywords: dressing pattern, female undergraduates' students, tertiary institutions, higher education.

Introduction

Dressing is an act of putting on clothes. Importance of wearing a cloth on the body is in order to protect, beautify or adorn it. Clothes are one of the basic necessities of man. In its widest sense, it includes a great range of material that man wears or applies to the body. Clothing includes dresses, shoes, jewellery, hairdo and make- up.

Clothing is also used to show people's status and the roles they play in society (Anyakoha, Eluwa, 2008). E.U. Anyakoha and M.A. Eluwa (2008) further explained that the clothe someone decides to wear influences the impression people have about such an individual. It also tells about the family such a person comes from. It can also affect the persons comfort and self-confidence. The dressing pattern of an individual is a kind of "sign language" that communicates a complete set of information and is usually the basis on which immediate impressions are formed (Kiran, 2002). Although there are no universally acceptable way or ways of dressing, dresses are meant to serve some definable purposes, notwithstanding on country or region. They are part of people's culture and they define their tribal or ethnic identity.

Apart from dresses being a means for cultural identity, they are for ornamental or aesthetic purposes, for protection of the body against harsh weather conditions as well as for covering the intimate part of the body (Why do people…, 2011). These purposes are important especially as they form major aspects of a person's personality.

Dressing pattern is the way or mode in which an individual or group of persons has accepted or chosen to appear in society. Dressing pattern or code is a set of standard that companies, schools, communities, organizations and institutions has accepted for their employee with guidance about what is appropriate wear for work (Olori, 2003). Dressing pattern is also a set of rules as in a school indicating the appropriate manner of dressing. According to T. Olori (2003) dressing pattern is a set of

rules or guidelines regarding the manner of dress acceptable in an office, school and restaurant. It is also a set of rules specifically the correct manner of dressing while on the premises of institution or specifying what manner of dressing that is prohibited.

U. Obilo and S. Okugo (2013) observed that public Nigerian universities are battling with the wave of indecency, notably among female students. The authors explained the situation as the reign of skimpy dresses on campus which has turned many campuses to fashion runways. Beside that wearing short skirts some female undergraduates throw caution to the wind by displaying their boobs as a cheap means of getting attention. Dress to kill is now a popular slogan in lecture halls with the intention of looking sexy or classy, forgetting that they ought to look responsible.

The dressing patterns of female undergraduates have been viewed as anti-African and are invented (Curbing moral…, 2011). This un-African dressing pattern among undergraduates of this generation has generated lots of concern and worry among the citizens. T. Olori (2003) viewed that the dressing pattern of female undergraduate students are determined by factors such as mass media, peer pressure, religious, culture among others.

Female undergraduates are females of various categories in higher institutions of learning. They fall within the range of early adolescence and late adolescence (it means within the age range of 16 to 30 years). R.O. Nnachi (2008) explained that it is a period of a stressful lifestyle where life of late adolescence is uneven or irregular.

The tertiary institutions are described as both an academic and social institution. It is viewed by the public as a panacea for the ills of the society. It is also expected to solve one's social, economic and political problems (Esiowu, Igbo, 2008). In higher institutions of learning, due to influence of peers and other environmental pressure, they have exaggerated need to appear and belong. The more fashionable and well-dressed the undergraduates, the higher status they achieve in the institution.

Most Nigerian ladies have dropped their traditional clothing styles to foreign styles. People of many countries have dropped their cultural clothing styles and adopted western dress styles for everyday wears. These dressing patterns or styles are regarded as sexy fashion which allowed a degree of display of the body for male appraisal and approval. These styles or patterns were not previously experienced in the streets because they were seemed the ultimate in decadent behaviour. The female undergraduate students have completely shifted to this crazy dressing pattern that makes them appear half naked most of the time.

A. Ku (2003) stated that clothing is an important area of personal satisfaction and source of social identification for every normal individual. Dresses should be capable of protecting the body, maintaining modesty and adornment.

However, indecent appearance has become the order of the day among many female students in higher institutions of learning, there is no higher institution in this country that is not affected with this problem. The students of these campuses of learning particularly the female ones, dress provocatively and seductively leave much to be discussed.

Female undergraduates try to dress as they see others dress or as a result of what is in vogue, not actually knowing the implications of such dressing styles. It is on this premise that this research work is set out to ascertain the determinants of dressing patterns of female undergraduates in higher institutions of learning in Abia State and suggest possible ways of inculcating good dress sense among them.

This research work aimed at examining the determinants of dressing patterns of female undergraduate students of Abia State tertiary institutions, what actually motivates the dressing patterns of these students. Specifically this study determined:

- the factors influencing the dressing patterns of female undergraduates in Abia State tertiary institutions,
- the effects of these dressing patterns on the female undergraduate students,
- the effect of these dressing patterns on the society,

- suggestions/possible ways of inculcating good dress sense among the female undergraduate students.

The following research questions guided the Study:

1. What are the factors influencing dressing pattern of female undergraduates in tertiary institutions?
2. What are the effects of these dressing patterns on the students?
3. What are the effects of these dressing patterns on the society?
4. What are the possible ways of inculcating proper dress sense among the female undergraduate students?

Methodology

The study used descriptive survey design. The focus were to the examination of the determinants of the dressing pattern of female undergraduates students in tertiary institutions in Abia State from a representative group of the population so that collected data can be generalized to the population.

The geographical location of this research work is Abia State, Nigeria. Abia coordinates $5^{O}25$'N, $7^{O}30$'E/5.417^{O} N / 7.500^{O} E / $5.417^{O}7.500$. It occupies about 6,32km^2 (2,440 sqm), its population is 2,833,999 according to the 2006 census). Its density is 450/km^2 (1,200/sqm). Abia is bounded on the north and north east by the States of Anambra, Enugu and Ebonyi, to the West of Abia is Imo State, the East and South east are Cross river and AkwaIbom States and to the South is Rivers State. There are 17 local government areas (LGAs) in Abia state. The capital city is Umuahia. Four tertiary institutions in Abia State was covered namely; Michael Okpara University of Agriculture, Umudike (MOUAU), Abia State UniversityUturu (ABSU), Abia State Poly Techniqe Aba, Abia State Technical College Arochukwu.

The population for the study was made up of all the female undergraduates in the four tertiary institutions in Abia State, Nigeria. The population of female undergraduates in these four tertiary institutions were; 7,108 for Michael Okpara University of Agriculture Umudike, 10,891 for Abia State University, Uturu, 8,240 for Abia State Poly Technique Aba, 3,382 in Abia State Technical College Arochukwu, making a total population of 29,595 female undergraduate students (Office of the Registrars, 2012/2013a; Office of the Registrars, 2012/2013b; Office of the Registrars, 2012/2013c; Office of the Registrars, 2012/2013d).

The sample for this study was drawn through random sampling techniques. Participants selected were female undergraduates at the four tertiary institutions in Abia State. Proportionate simple random sampling was further used to sample female undergraduates from the four tertiary institutions. Sample sizes of 400 were selected, 96 female students were sampled in MOUAU, 148 female students were sampled in ABSU, 111 were sampled in Abia poly, 45 were sampled in Aro-chukwu Technical College of Education.

Structured questionnaire was used for data collection. The instrument was constructed using a 4 point scale to guide the responses. The questionnaire items were generated based on the information gathered from review of related literature. It contained twenty seven (27) questions and was validated by 2 experts in the related fields. Test, retest method was used to test for reliability of instruments.

A total of 400 copies of the questionnaires were distributed by hand to the subjects who made up the sample by the researcher and two research assistants. Out of 400 questionnaire distributed, only 393 (98.25%) were completely filled and returned. The statistical tools used for data analysis were frequency, mean and simple percentages (%) Frequency was used to organize the data collected. Percentage (%) was used to analyze the demographic data of the students while means was used to analyze the responses to research questions. The mean was calculated by assigning nominal values to the response categories. Strongly agree (SA); agree (A); strongly disagree (SD); disagree (D) with values 4, 3, 2 and 1 assigned respectively. An interval of scale of 0.5 was added to the mean to give 3.00 any response of 3 and above is regarded as agreed while response less than 3.00 is regarded as disagreed.

Results and discussion

Table 1

Mean responses of the subjects on the factors influencing the dressing patterns of female undergraduates in tertiary institutions

S/N	FACTORS	$\bar{X}$	Remark
1	Imitation of western dressing style.	3.95	A
2	Peer/social grouppressure.	3.90	A
3	Mass media e.g. imitating Actresses, Newscaster.	4.02	A
4	Family Orientation.	3.22	A
5	Religious group doctrine.	3.17	A
6	Fashion in vogue	4.02	A

Key: $\bar{X}$ = Mean Score of the Respondents, A = Acceptable Mean Responses.

In the above table (Table 1) the entire respondents agreed that the six factors above are factors influencing the dressing pattern of female undergraduate students with items 3 and 6 having the highest mean score of 4.02 respectively.

Table 2

Mean responses of the subjects on the effects of the female undergraduates dressing pattern on the students

S/N	The Effects	$\bar{X}$	Remark
7	Sexual Harassment.	3.66	A
8	Rape.	3.75	A
9	HIV/AIDS.	2.97	NA
10	Venereal Disease.	3.29	A
11	Students being Addressed as prostitutes.	3.52	A
12	Lying/sinning against God.	2.94	NA
13	Unwanted pregnancy.	3.13	A
14	Tendency to Steal.	3.03	A
15	Poor Academic performance.	2.0	NA

Key:$\bar{x}$ = Mean Response of the Subjects, A= Acceptable Mean Score, NA=None Acceptable

In the above table (Table 2) the respondents agreed in six (6) instances that the dressing patterns adopted by the female undergraduates' students have some negative effects on the students. This was shown vividly in their mean responses which were up to and even above the acceptable mean score of 2.50. Also in the same table, the respondents did not agree in three (3) instances. This was shown in their mean scores which did not reach up to the acceptable mean score of 2.50.

Table 3

Mean responses of the subjects on the effects of the dressing patterns of the female undergraduate's students on the society

S/N	Effect of students dressing pattern on the society	$\bar{X}$	Remark
16	Decay in human standard.	3.14	A
17	Spread of diseases.	3.34	A
18	Increase in abortion rate.	2.41	NA
19	Society seen as home for frustrated nuisance.	3.29	A
20	High rate of population.	3.56	A

Key: $\bar{x}$ = Mean Responses of the Respondents, A = Acceptable Mean Responses, NA = None Acceptable Mean Responses

In Table 3 above, the respondents agreed in 4 instances that the students dressing patterns have effect on the society while in one (1) instance the respondents disagreed to that. This was shown in the mean responses of the subjects' (Table 3).

Table 4

Mean responses of the subjects on the ways of inculcating proper dress sense among female undergraduate students

S/N	Proper Ways of Dressing Among Female Undergraduates.	$\bar{X}$	Remark
21	Clothes should cover the body properly.	3.44	A
22	Students should wear clothes that fit its purpose and activities.	3.08	A
23	Using clothing accessories correctly.	3.65	A
24	In making clothing choice, students should not be carried away by the wind of fashion.	3.64	A
25	Good religious doctrine about dressing should always be maintained.	2.60	NA
26	Always like what you see in the mirror.	2.54	NA
27	Students should have Self confidence in making choice of dresses.	3.13	A

Key: $\bar{x}$ = Mean Responses of the Respondents, A = Acceptable Mean Responses
NA = None Acceptable Mean Responses.

In the above table (Table 4) the respondents agreed in 5 instances (21, 22, 23, 24 and 27) were accepted as the proper way of inculcating proper dress sense among female undergraduate students while in 2 instances (25 and 26) were rejected as ways of inculcating proper dress sense.

Research question 1 sought to find the factors influencing the dressing patterns of female undergraduate students. The findings revealed that majority of the students imitate western style in their dressing pattern. A mean value of 3.95 which was quite above the mean cut off score indicates that, it is accepted as a factor. This finding is in line with Kiran (2002) who stated that people of many countries have dropped their cultural dressing styles and adopted western dress styles for everyday wear. Another factor that had a very high mean score was peer/social pressure groups which have an average mean value of 3.90 and therefore was considered as an accepted factor. The finding agrees with A.P. Esiowu and C.A. Igbo (2008) who stated that when people with whom they associate with wear particular styles of clothing, they tend to assume that their styles are always correct; and then tend to adopt them as their own. Hence the bible injunction that evil corrupts good manner.

Mass Media has mean level of 4.02 which is above the mean cut off of 3.0 and so it is accepted. This goes a long way to explain that mass media is the fastest means of communication in recent times due to rapid development in the information communication technology (ICT). Family orientation has mean value 3.22 which is also above the mean cut-off level. This finding agreed with J. Omede (2011) who observed that a child lives or die thrive or wither, due to the decision of their parents. Religious group/dressing doctrine of a church has mean value of 3.17 which is above the mean cut-off level of 2.50 and it is accepted. This shows that religious organizations have vital roles in shaping the characters of their congregations even in teaching the members proper dress sense. Following popular style is fashion in vogue has a mean score of 4.02 which is quite above the accepted mean score. This is in line with A.O. Obeta's (2010) earlier findings that some people tend to follow the wind of fashion blindly. She explained that it should not be like that. People should wear what is suitable at all occasions and should not imitate the dressing style of another person because people have varying figure types, what is fitted and suitable to someone may not be good enough to another individual.

The data on Table 2 revealed that the dressing pattern of female undergraduate's students has effect on the students. Unfortunately because some of the western styles these female undergraduate students have adopted were not accepted by the society, it is viewed as anti-African. This un-African dress pattern among these females has generated lots of concern and worry among the citizens of the country. Sexual harassment has a mean level 3.66 which is above the mean cut-off level and so it is accepted. This finding is in line with J. Omede (2011) who pointed out that the forms of dresses

suggest that such ladies are looking for attention and that they are irresponsible. Rape has mean level of 3.75 and was said to be accepted because this is above the acceptable mean score of 2.50. According to Nigerian Films.Com (Campus Dress Code…, 2009),when the parts of the body that are supposed to be closed are exposed, some students or men may be tempted and can employ all means including rape to get the students and have canal knowledge of such student. Unprotected sexual intercourse may result and the victims may be exposed to all forms of venereal diseases including HIV/Aids and Ebola virus diseases. The student being addressed as prostitutes was accepted with mean value of 3.52. Imagine a student from a reputable family in the society being addressed as a prostitute and when the parent of such students happened to hear that. That may send some parents to early give because not all the parents will have the mind to bear it, some may even develop high blood pressure and may die of it.

Unwanted pregnancy has a mean value of 3.13 from the findings and was accepted as an effect as it is above the mean cut-off level of 2.50. This is possible because when a student is raped or forced into sex, pregnancy may result and such pregnancy is unwanted. The students' academic studies may be delayed or hindered permanently as not all parents will accommodate that. Some of the young girls in the society roaming the street are already victims. It should not be overstatement to say that some of the affected students were always occupied in mind by always thinking of what to wear or how to dress. When this occupies the minds of the student, consequently the academic performance of such student will suffer and thus will definitely lead to poor academic performance.

The findings on the Effect of Indecent Dressing Pattern on the Society as revealed in table 3 shows that spread of diseases, decay in human standard and identity and high rate of population has mean value of 3.34, 3.14 and 3.56 respectively, thus accepted because their mean is above the mean cut-off of 2.50. These dressing patterns have so much tarnished the image of our society as though devil has been unchained, consequently turned the society into a home for frustrated persons.

In Table 4, the findings of the study revealed that proper dress sense can be inculcated in the students by encouraging the students to wear clothes that cover the body properly. Students should wear clothes that fit its purpose and activities and not being carried by the wind of fashion/ fashion trend sheepishly. Using clothing accessories correctly and have self-confidence. The findings is in agreement with J.C. Unegbu (2006) who pointed out that an individual is well dressed when the person knows what truly gives the individual fittings and goes for it, one is well dressed when one does not follow the fashion blindly but always make effort to create personal style out of what is fashionable.

Conclusions

The study focused on the determinants of dressing patterns of female undergraduate students in tertiary institutions in Abia State, the study determined the factors influencing the dressing patterns of female students in tertiary institutions in Abia State, the effects of indecent dressing pattern on the students, and the society, and ways of inculcating proper dress sense on the students. The study was conducted in four major tertiary institutions in Abia State. Three hundred and ninety three (393) representing 98.25% female undergraduate students were involved in the study.

The results indicated that imitation of western style, peer pressure or social group, Mass Media and following popular style in fashion at present has greater influence on the dressing patterns of female undergraduates whereas family orientation and religious groups or church doctrine about dressing has lesser influence.

Also sexual harassment, rape, other venereal disease contracted through sexual intercourse, students being addressed as prostitute, tendency to steal and unwanted pregnancy has major effect on the students. Also spread of disease, decay in human standard and identity high rate of population were seen as the effects of indecent dressing pattern on the society. Also the findings revealed that students should cover their bodies properly with their own instinct without being forced to do so, wearing clothes that fit, not being carried away by the wind of fashion. Having self-confidence, wearing clothes that covers the body properly among others were accepted as ways of inculcating proper dress sense among female undergraduates.

Recommendations

Based on the above findings and discussions, the following recommendations were made:

- Mass Media should contend rather than support indecent dressing. The display of some indecently dressed young girls for adverts and attraction should be discouraged.
- Programmes that sample opinions of Nigerians on indecent dressing should be regularly put in place in addition to debates on the issue by youths in institutions of learning as means of effective sensitization.
- Churches should also help through regular sermons or preaching as well as counselling, pastors and Imams should resist and insist on healthy development of their members.
- Involvement of the university authority in the dressing patterns of the female students will to large extent control the present ugly manner of dressing styles. The senate, the university council, student affairs, heads of departments and lecturers should see the correction of the female students' anti-African pattern of dressing by female undergraduates as serious abnormalities.
- Good dress sense can also be motivated by the formation of campus brigade, this brigade or club is to stand against indecent dressing by sanitizing and promoting good moral values particularly, the modest African dress patterns.

Bibliography

1. Answers. Com (2011). *Why do People Wear Clothes?* [online] [08.06.2013]. Available at http://www.answers.com/Q/why-do-people-wear-clothes
2. Anyakoha E.U, Eluwa, M.A. (2008). *Home Management for Schools and Colleges.* Onitsha, Nigeria, Africana Fep.pub. Ltd. p. 143.
3. Curbing Moral Decadence in Our Educational Sector (2011). Portal: Articlesbase [online] [10.06.2013]. Available at http://www.articlebase.com/college-and university-articles/curbing-moral-decadence-on-our-educational sector-4692398
4. Esiowu A.P., Igbo C.A. (2008). Clothing for Self Expression by Female Undergraduates in Universities in the South Eastern States of Nigeria. *Journal of Home Economics Research (JHER); No.9., pp.138-147.*
5. Kiran A., Riaz A., Malik N.H. (2002). Factors Affecting Change in the Clothing Patterns of Adolescent Girls. Research Report. College of Home Economics Lahore. *International Journal of Agricultue and Biology*, Pakistan, Vol. 4., No. 3,
6. Ku A. (2003). *Clothing as Communicator*. [online] [15.04.2005]. Available at http://www.analyticalq.com/default.htm
7. *Campus Dress Code; Striking a Balance between Modernity and Modesty.* (2009). Portal: Nigerian Films. [online] [10.06.2011]. Available at http://nigeriafilms.com
8. Nnachi R. O. (2008). *Introduction to Psychology in Education,* Second Edition, Barloz Publishers Inc.Zander Street, Owerri, Nigeria, p.267-268.
9. Obeta, A. O. (2010). Perception of Good Dress Sense among Female Undergraduate Students of Higher Institution in Abia State, Nigeria. *Journal of Home Economics Research*, Vol.21:12, pp.52-61.
10. Obilo U., Okugo S. (2013). Outrage Over Indecent Dressing on Campus. Public Nigerian. [online] [31.12.2013]. Available at http://sunnewsonline.com/new/?p=47593
11. Office of the Registrar (2012/2013a). Students Nominal Roll, Abia State University, Uturu, Abia State, Nigeria.
12. Office of the Registrar (2012/2013b). Students Nominal Roll, Abia State Polytechnics, Aba, Abia State, Nigeria.
13. Office of the Registrar (2012/2013c). Students Nominal Roll Michael Okpara University of Agriculture, Umudike, Nigeria.
14. Office of the Registrar (2012/2013d). Students Nominal Roll, College of Education Technical Aro-chukwu, Nigeria.
15. Olori T. (2003). *Culture-Nigeria, "Indecent" Dressing Banned on the Campus.* [online] [08.09.2011]. Available at http://www.ipsnews.net/Africa/interna.asp?idnews=20018
16. Omede J. (2011). Indecent Dressing on Campuses of Higher Institutions of Learning in Nigeria: Implications for Counselling. Portal: Articlesbase, JETERAPS 2 (4), pp.228-233.
17. Unegbu J. C. (2006). *The Angel Woman.* Nation-wide publishers LTD, 109b Royce road Owerri, Nigeria.

The physical Learning Environment of Home Economics Classes –Estonian Teachers' and Pupils' Opinions

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Abstract: Learning environment can be considered from several aspects, such as physical, mental, social or aesthetical. Previous studies show that different stakeholders have various opinions about a good learning environment. For pupils the learning environment creates an atmosphere where they spend a greater part of their day, while for teachers it determines pedagogical possibilities for conducting lessons. According to the national curriculum, the learning environment promotes pupils' development as independent and active learners. Therefore, it is important that the condition of contemporary home economics classroom also fosters pupils' learning. Most Estonian schools were built more than 30 years ago. Although the concept of learning and learning environment has changed, it has not been known how Estonian schools are able to meet the changing needs of the contemporary learning environments. The aim of this paper was to introduce two small-scale qualitative studies of the physical learning environment in home economics classes. In both studies, the data collection method was observation of physical learning environment followed by interviews with pupils (n=40) and teachers (n=4). As expected, pupils' opinions were mostly positive as they don't have the experience of working in different conditions. Teachers' answers were more versatile. They mostly pointed out the incongruity of the learning environment that does not enable them to fulfil the syllabus. One notable finding was that insufficient physical environment has no impact on home economics teachers' job satisfaction. However, it is crucial to draw attention to the need to update the learning environment so that the attainment of learning outcomes set by the curriculum is not hindered.

Keywords: school education, physical learning environment, home economics, teachers' and pupils' opinions.

Introduction

Teachers and pupils spend considerable part of their days in school environment. Therefore, school needs to be a pleasant place to go. It must be modern, secure and well-functioning surroundings for both pupils and teachers. The learning environment needs to be designed thoughtfully.

Learning environment is valued but also analysed as an indicator of qualitative education (Läänemets 2001). It is not only the aesthetical need why the appearance of the learning environment should be contemporary. Physical conditions are visible and therefore often discussed. Physical learning environment impacts the acquisition of knowledge as well as learning activities because learning is closely related to the time and space it is taking place. It influences pupils' and teachers' health, sense of security and psychological state (Beljajev, Vanari, 2006). In addition, physical factors influence people's minds and emotions. Thus, it is important that physical environmental factors do not distract the attention of learners and teachers.

A learning environment can be examined from several angles. Traditionally it has been understood as the classroom or school, in some context including also the learning space in pupils home. A. Collins and J.S. Brown defined the characteristics of an ideal learning environments naming content, method, sequence and sociology as four dimensions that constitute any learning environment (Collins, Brown 1989). While A. Brotherus and J. Hytönen (2001) and U. Läänemets (2001) alike claim that learning environment always contains three main areas. These are rooms (the physical features of the learning space); learning tools (pedagogical features) and human context (interaction between people and the environment). The concept of learning environment in Estonian National Curriculum for Basic School (Põhikooli riiklik …, 2011) is similar. It is broadly considered to be an environment which supports pupils' development and learning. Estonian curriculum also emphasizes social and physical aspects of the environment around the pupil, adding mental side too. Similarly, H.C.Lindgren and W.N.Suter

point out that learning environment includes the psychological climate and atmosphere in the school and classroom (Lindgren, Suter 1994). P.Tynjälä (1999) however defines constructivist (the basis for Estonian curriculum) learning environment from the learners' point of view. He names previous knowledge and beliefs, attention to metacognitive skills and knowledge, the integration of knowledge acquisition and knowledge use, the use of multiple representations of concepts and information, and assessment embedded in the learning process. With the development of learning theories new aspects have been added to this concept. For instance, learning outside the classroom – in a museum, shop etc. the development of technology has also widened the meaning of learning environment by adding virtual learning opportunities. Regardless of the way this concept is defined the main role of the learning environment remains constant – to motivate pupil, to offer possibilities for learning activities and to support achieving goals.

In this article, the learning environment is considered to influence participants during teaching and learning in home economics lessons. According to the national curriculum (Põhikooli riiklik..., 2011), the learning environment promotes pupils' development as independent and active learners. Home economics as a school subject gives pupils possibilities to integrate theoretical knowledge with practical activities. It gives knowledge and skills for pupils' everyday life and is targeted to develop individuals that are able to analyse situations and act responsibly. Therefore home economics classrooms should meet the contemporary requirements for achieving learning outcomes.

A. Pink (2010) stresses that for school subjects with practical orientation like home economics it is essential to have an elaborated and proper learning environment. The characteristics of a particular subject and its unique learning tasks shape the direction of the development of learning environment (Kanarbik, 2012). A home economics class is different compared to other classrooms, its furniture and equipment is specific. Therefore, only the subject's teacher is able to frame the necessary requirements for home economics classroom according to the syllabus and learning methods they will use. Consequently, to reach the best possible result, teachers, school leaders, designers and builders need to work in collaboration when building or renovating facilities for learning.

At the same time, most Estonian schools were built more than 30 years ago while the concept of learning and learning environment have changed remarkably since the time. Rapid changes in the society have also reformed domestic work and through that new expectations for the syllabus of home economics have been set. There are new materials, tools and activities at home; food preparation has new methods; new technologies have been developed; issues like ergonomics, work space safety and waste reduction have been added to the syllabus. Accordingly, home economics learning environment (its technology, tools, materials and furniture) needs to fulfil today's educational expectations (Malin, 2011). Regardless of the fact that most Estonian schools have been modernized within last 10 years it has not been known yet how home economics classrooms are able to meet the changing needs of the contemporary learning environment; what is pupils' attitude towards the learning environment; or how it influences teachers' work satisfaction.

Previous studies (Loogma, Ruus, 2009; Piispanen, 2008; Salumaa, 2007) show that different stakeholders have various opinions about learning environment. M. Piispanen (2008) has studied pupils', teachers' and parents' opinions about the good learning environment. The social and psychological dimension of learning environment was mostly mentioned by parents. While in pupils´ answers, the good accommodation and good equipment were seen as the basis for learning and school atmosphere. Besides they hoped for adequate interior space, which would also be modern and versatile – it should be possible to use different methods for work. M. Duckenfield (1989) and E. Hebert (1998) confirm that the organization of learning environment has impact on pupils learning outcomes. Pupils' feelings depend on physical learning environment and this in its turn affects their attitudes toward schools as well as their behaviour in school. Moreover, good learning environment is believed to prevent behavioural problems. Also A. Kidron (1999) affirms that environment influences the quality of working and interaction, increasing or decreasing pupils' concentration. A well-functioning learning environment that can be used flexibly simplifies the learning process. Upgrading the conditions of physical learning environment leads to an improvement of pupils learning outcomes (Kanarbik, 2012; Ots, 2007).

The growing social communication between people necessitates that the learning environment which connects pupils would also change from physical into social and by that support pupils' interaction. Valid curriculum (Põhikooli riiklik..., 2011) has set social learning into the central position. It emphasises the pupil's interaction with the teacher, each other and the environment. Learning in home economics lesson is often collaborative and therefore this subject is good for pupils to practice social skills – benign and respectful attitude toward fellow pupils; ability to organize and cooperate; and skills to analyse and evaluate joint work (Pink, 2010).

From teachers' point of view the pedagogic side of learning environment is essential, meaning that it needs to have versatile possibilities for conducting lessons (Piispanen, 2008). E.S. Sarv (2011) emphasizes that flexible room usage and modern tools are the basis for contemporary learning methods. A. Malin (2011) has studied interaction in home economics lessons. She points out that the placement of the furniture in the classroom is critical. Shortly, the furniture should not only allow but also foster pupils' collaboration and interaction. The interior of home economics classroom should allow teacher and pupils to move safely and freely and reorganize furniture according to chosen learning tasks. In addition, it is not less important that home economics classrooms need to be easily cleaned.

Teachers' dissatisfaction with the learning environment influences directly their work and through that also the quality of education that is given to pupils (Ots, 2007). Regardless of what method the teacher uses, in which paradigm they consciously or unconsciously act, they are at the same time the creators of as well as limited by the features of the learning environment (Sarv, 2011). On the one hand, teachers need to follow the curriculum set by the state. On the other hand, they need to keep in mind those real possibilities (learning tools, kitchen equipment etc.) what their classroom enables to use (Kaljuste 2005).

Work satisfaction according to work psychology includes two sides (Loogma, Ruus, 2009). First, the influence of working conditions on job satisfaction. And second, employees' professional behaviour – deliverables, personal development, absence from or leaving work. One of the main reasons for teachers' dissatisfaction with their work is the insufficient learning environment that does not facilitate fulfilling the syllabus. E. Kaljuste (2005) has studied handicraft and home economics teachers' perception of their working conditions. 52% of the respondents were not satisfied with learning tools they had in classroom. Unfortunately, the same problem was named by handicraft and home economics teachers several years later (Randla, 2012). The main challenge when trying to fulfil the syllabus is material base – not enough learning materials and technological tools for all pupils to work simultaneously. More than half of the teachers also named other aspects of physical learning environment, such as confined space, old facilities, poor lighting or not having any kind of facility for home economics lessons (Kaljuste, 2005). T. Elenurm and A. Kasmel add room temperature, humidity, vibration, strong odour and hideous rooms. The latter aspects have traditionally been part of poor working conditions (Elenurm, Kasmel, 1997).

Teachers' job satisfaction is also related to how strongly they feel about their professional skills and to what extent their physiological needs are met (Salumaa, 2007). The more confident and satisfied they feel, the stronger is their perceived self-efficacy. K. Loogma and V.L. Ruus name that for the teachers' self-efficacy it is critical to feel confidence, participate in school and curriculum development, to have a fair power for decision-making, necessary learning materials and public respect (Loogma, Ruus 2009). E. Krull (2002) has also named teachers authority over pupils, colleagues and parents as an important factor for teachers' self-efficacy.

Methodology

This paper gives an overview of two small-scale qualitative studies of the physical learning environment in Estonian schools' home economics classes. In both studies the main data collection method was the observation of physical learning environment (n=51) through photographs and additional information about the facilities of home economics classrooms. Information about the room size, size of the study groups, kitchen equipment, safety issues etc. was asked. Photographs of the classrooms were taken either by the researchers while visiting schools or by home economics teachers.

The situation of home economics classrooms was mapped comparing observational notes, photographs and additional information.

In addition, pupils' and teachers' opinion about home economics classrooms was asked. The main interest in teachers' (n=4, representing 6 schools) semi-structured interviews was their satisfaction with learning environment and its influence on their work satisfaction. Therefore the sample included home economics teachers from city and rural schools who work in various conditions. A teacher who works in three different schools had an experience of working in various conditions and thereby also a better understanding of how room conditions may influence teachers' work satisfaction. Teachers' interviews were organized in their home economics classrooms in order to help them introduce possibilities and problems of the particular learning environment. For example: "*Are you satisfied with the home economics classroom? Point out a positive and a negative side*." Likewise, it was good for the researcher to see the classroom conditions as an illustration for teachers' talk.

Pupils' (n=40, from 11 school) interviews were organized in focus groups, one in each school. Focus groups produce large amounts of data on the researcher's specific interest in a short period of time (Stewart, Shamdasani, 2007). Conversation in the focus group can lead to people opening up further about some information they may not have wanted to share in a one-on-one interview. Chosen schools represented different learning environments. The sample consisted of 7^{th} till 9^{th} grade pupils. All participants of the pupils' survey were girls, as they more likely had participated in home economics lessons. Interviews were conducted in home economics classrooms so that pupils could express their opinion in the natural learning environment. For example: "*What would you like to change in home economics class?*", "*What could be the ideal home economics classroom?*" etc.

All interviews were recorded and transcribed. Transcriptions were analysed using content analysis (Schreier, 2014). Qualitative content analysis helps to reduce data, it is systematic and flexible. To understand pupils' and teachers' opinions about the learning environment, the data was assigned by using three codes – physical, mental and social as well as aesthetic aspects of the learning environment.

Results and discussion

The current study faced several difficulties when gathering the information needed to map the conditions of home economics classes. First e-mails were sent to general education schools (n= 58) located in two counties in the Estonian border area in order to get permission to visit home economics classrooms, and to conduct interviews. Sent e-mail received the response only from 9 schools principals or head teachers. To include more schools in this study, the follow-up emails were sent out, and 20 more schools responded to the letter. After calling the rest of the schools, it turned out that some teachers do not read e-mails and therefore they had not answered. In three occasions the teacher had a very high workload, and did not have the time to participate in such studies. As a result, altogether 51 schools' home-economics classes were mapped.

Overview of home economics classes

Home economics classes were divided into four groups on the basis of national curriculum (Põhikooli riiklik..., 2011) and the regulations set by the Ministry of Social Affairs (Tervisekaitsenõuded koolidele..., 2013), which specifies the requirements for learning environment. Schools which had modern and proper home economics class formed the first group. The second group consisted of schools where home economics classrooms' conditions were satisfactory, while the third group comprised schools which didn't meet the requirements of home economics learning environment. In the fourth group were schools with no home economics class. For example, the satisfactory home economics class had no ventilation, did not have modern equipment, and the number of the cooking tools did not correspond to the number of pupils. It can be considered as a good result that in large proportion (22 classrooms) of mapped schools' study kitchens were proper, 14 home economics classes were assessed as satisfactory, and there were only two classrooms which did not meet the requirements. Altogether 13 schools were without study kitchen. Unfortunately, in seven of those schools no home economics lessons were held. In other similar schools practical lessons are held for

instance in the school canteen (3 schools), in another school (1 school), in the local youth centre (1 school) or in a nearby cafe (1 school). Finding solutions depends on the teacher's desire to carry out practical home economics lessons.

Pupils' study

The overall results are positive as pupils enjoy home economics lessons. Practical lessons are more valued because pupils are aware of their necessity. In all schools pupils were more or less satisfied with home economics classroom. In three schools lack of appropriate conditions was considered to be a disadvantage. Pupils from the schools where there is a little study kitchen mentioned that the space for working is limited. In addition they are required to take some of the tools (e.g. hand mixer) from home. Pupils expressed their dislike as follows: "*I don't like that we must bring our own tools*." (Anne, 9th grade). Pupils also pointed their dissatisfaction with the issue that teachers use the home economics class as a coffee room. The latter confirms that learners' knowledge is related to their attitudes. For pupils the home economics classroom is a learning environment and they prefer it to be used accordingly.

Usually pupils bring their own foodstuff for practical cooking to home economics lessons. It has been that way for a long time, although the national curriculum (2011) says "*The school provides necessary materials and basic tools needed for technology field subjects"*. Unfortunately we did not confirm this claim during the pupils' interviews. At the same time pupils didn't complain about it. It was revealed that many schools use the opportunity for collecting money from pupils for buying foodstuff, so when they come to home economics class, the food products are already there.

Home economics lessons give pupils the opportunity to take responsibility for their actions and act independently. As an example, in many schools, pupils themselves can choose the recipes what to prepare in the lesson. At the same time too much independence does not support pupils learning. It was thought-provoking to find that practical lessons in some schools were carried out without the teacher's involvement. As an example, one of the pupils explained how their lesson goes: "*Half of the girls cook, half do handicraft. Selection is free. We start during the break, then there's no teacher. The recipe is not agreed on with the teacher. She does her own things, we ask for assistance if needed. When the food is ready, we set the table. We eat and then clean up* ". (Reelika, 8th grade). Although it emerged that these kind of practical cooking lessons are preferred by pupils, it raises the question whether these kinds of lessons correspond to the learning outcomes defined in the home economics syllabus and jeopardize pupils' learning as well as their safety.

In addition, pupils' opinions about the modern home economics classroom were asked. Pupils, whose school had a poorer study kitchen, could not ask for better conditions, because they have no experience of working in a well-equipped environment. However, pupils who are learning in good conditions did not see the possibilities for further improvement of the learning environment. It is also interesting that pupils did not bring out the topics that satisfy them, e.g. the mental or aesthetic aspects of learning environment. Thus, based on pupils' responses to the interviews, it can be pointed out that pleasant, practical activity outweighs the material side of the classroom. It was pleasant to hear, that some pupils also wanted to do other activities (besides practical) in home economics lessons. Many of the pupils thought that home economics should be a separate subject in their timetable and not shared with handicraft as set by the curriculum in Estonia. It could be presumed that this being a separate subject would also help to improve the physical learning environment in home economics.

Teachers' study

Most of the teachers who participated in the interview were satisfied with the situation of home economics classroom. In two schools, which do not meet the requirements of study kitchen, practical lessons are carried out on the basis of the existing learning environment conditions. For example, the teacher provides the necessary tools from home, the canteens' refrigerator is used, dishwashing water is boiled in the kettle, etc. Nevertheless, depending on the teacher, home economics lessons take place in spite of the poor conditions.

Teachers also pointed out the factors they are not satisfied with. For example, lack of space, equipment and modern technology hinder the conduction of effective home economics lessons. One school, where home economics and craft lessons are carried out in a room which had not been built as a study room, the teacher named several challenges: the furniture cannot be rearranged (to form group-work areas etc.), worktops are very small and there is no place for teacher's worktable. Interview results confirmed the results of the study carried out by E. Kaljuste (2005), which also found that the confined space is one of the reasons for dissatisfaction.

Teachers pointed out lack of tools as both positive and negative side. Lack of tools sets certain limits but at the same time it does not let them get too comfortable. One of the teachers explains: *"You cannot teach the kids something very modern, as there's no modern equipment. And then the classroom itself is a big minus, as the children have much better conditions at home than in the class"* (Teacher 2). Similarly to Randla (2012) it could be pointed out from the analysis of the interviews that the lack of modern technology and tools are seen by teachers as the main obstacle to the fulfilment of home economics syllabus. It turned out that all the interviewees bring the necessary tools from their homes, also their family members, colleagues and pupils contribute to creating the home economics learning environment.

While visiting home economics classes and interviewing teachers the researcher noticed that even though the physical learning environment in all schools does not meet modern requirements teachers still find appropriate ways to shape the mental and social learning environment. Craft and home economics lessons have a very good potentiality of developing pupils' individual learning skills, there is a continuous collaboration in home economics lessons, pupils learn to reckon with each other, work towards a common goal and share working tools. Therefore, teachers in home economics lessons use teaching methods that encourage pupil collaboration and social interaction develop thinking skills and broaden their horizons. It is essential for teachers to recognize that working processes as well as the extensive skills acquired through that process are important for learning in home economics lessons (Pink, 2010).

Teachers generally have a positive attitude towards their work and it even increases during their working experience (Loogma, Ruus, 2009). The current study also showed that more experienced craft and home economics teachers find solutions how to work in any conditions. Interviewed teachers have a positive attitude towards their work and do not dream about things that cannot be obtained; instead they creatively approach the learning environment. They say: *"So what if there are not enough things we need, we always say that we save the situation"* (Teacher 4) and *"We find solutions how to cope with the existing [tools] and do not complain, because, after all, pupils enjoy these lessons, and it is the main thing"* (Teacher 2). Although from time to time they receive some necessary tools for study kitchen, the interviewed teachers confirmed that the schools lack the resources to improve the situation of home economics class.

In addition, teachers note that cooking classes are intense and tiring for them as they have to ensure the safety of pupils and watch the required time. Time was mentioned in all the teachers' responses. The time expenditure is greater when there is no modern technology and equipment. All teachers pointed out that, for example, the dishwasher would significantly save time and reduce teachers' as well as pupils' work load. Although poor learning environment makes teachers work harder pupils' satisfaction and experience of success in home economics lessons gives teachers energy and will to organize memorable lessons again and again in existing conditions.

Conclusions

Even though experienced teachers manage in all conditions, a poor learning environment does inspire neither them nor pupils. Therefore, it is important to find ways how to develop a learning environment that enables to create a qualitative setting for learning and teaching. Contemporary conditions promote teachers to use versatile methods when conducting home economics lessons.

Regardless of the regulations set on the government level for learning environment, home economics classrooms in schools do not correspond to the needs to produce the current learning outcomes. Changes in the physical learning environment on the school level requires more time than applying a

new curriculum or new methods. Although the teacher is considered to be the creator of a good learning environment, in home economics case the collaboration between different stakeholders is important. Social and mental environment depends on teachers' knowledge and skills to create and develop stable and learning supporting surroundings. The teacher is also able to improve aesthetical environment, for example through pupils' project work. While at the same time the development of the physical learning environment cannot be only teachers' duty as it demands financial resources as well as the change of the attitude (parents, school leaders, society) towards home economics and the concept of learning.

The current study shows that pupils like practical cooking lessons regardless of the conditions in home economics class. As they lack other experience, they are not able to adequately evaluate the current learning environment. Controversially, the teachers in this study were critical about the physical learning environment, but nevertheless claimed to be satisfied with their work. It is good to see, that teachers love their profession but unfortunately not all the teachers are aware of the changes in the home economics syllabus, i.e. widened content of the subject.

Bibliography

1. Beljajev R., Vanari K. (2006). *Õppimine ja õppimisoskuste arendamine täiskasvanuna*. (Studying and Development of Studying Skills in Adulthood), Tallinn: Sisekaitseakadeemia. (In Estonian)
2. Brotherus A., Hytönen J., Krokfors, L. (2001). *Esi- ja algõpetuse didaktika*. (Pre-school and elementary school didactics). Tallinn. (In Estonian)
3. Collins A., Brown J. S., Newman S. E. (1989). Cognitive Apprenticeship: Teaching the Crafts of Reading, Writing and Mathematics. In Resnick, L. B. (Ed.), *Knowing, Learning and Instruction. Esseys in Honor of Robert Glaser*. London, Lawrence Erlbaum, p. 453-494.
4. Duckenfield M. (1989). *The Quality of the Physical Environment of the School and the Quality of Education*. Paris, OECD Publications.
5. Elenurm T., Kasmel A., Kidron A., Rüütel E., Teiverlaur M., Traat U. (1997). Stressi teejuht. (Stress Guide). Tallinn: Tallinna Raamatutrükikoda. (In Estonian)
6. Hebert E. (1998). Design Matters: How School Environment Affects Children. *Educational Leadership.* Nr.09, pp. 69-70.
7. Kaljuste E. (2005). Käsitööõpetajate vajadused, hoiakud ning väärtushinnangud professionaalse arengu ja komponentsuse kujunemise alusena. (The needs, attitudes, and values of craft teachers as a basis for the professional development and formation of competence.) In Lind, E. *Käsitöö- ja kodundusõpe nüüdisajal*. (Handicraft and Home Economics Today). Tallinn, Tallinna Ülikooli toimetised. (In Estonian)
8. Kanarbik K. (2012). *Füüsilise õpikeskkonna kujundamine ja selle mõju õpitulemustele*. (Development of Physical Learning Environment and its Influence on Learning Outcomes). Masters' Theses. Tallinn, Tallinn University. (In Estonian)
9. Kidron A. (1999). *122 õpetamistarkust*. (122 Teaching Wisdoms). Tallinn, Andra ja Mondo. (In Estonian)
10. Krull E. (2002). *Eesti õpetaja pedagoogilised arusaamad, arvamused ja hoiakud millenniumivahetusel: küsitluse „Töö klassis õpetaja pilguga" tulemused ja põhijäreldused.* (Estonian teachers' pedagogical perceptions, opinions and attitudes at the tirn of the millenium: results and key findings of the survey "Teachers' Glimpse on Working in the Class"). Tartu, Tartu Ülikooli Kirjastus. (In Estonian)
11. Lindgren H.C., Suter W.N. (1994). *Pedagoogiline psühholoogia koolipraktikas*. (Pedagogical Psychology in School Practice). Tartu, Tartu Ülikool. (In Estonian)
12. Loogma K., Ruus V.L., Talts L., Poom-Valickis K. (2009). Õpetaja professionaalsus ning tõhusama õpetamis- ja õppimiskeskkonna loomine. *OECD rahvusvahelise õpetamise ja õppimise uuringu TALIS tulemused.* (Results of the TALIS – The OECD Teaching and Learning International Survey). Tallinn: Tallinna Ülikooli Haridusuuringute Keskus. (In Estonian)
13. Läänemets U. (2001). Õppekava ja õpikeskkond. (Curriculum and Learning Environment). *Haridus* (Education), 2, pp. 18-23. (In Estonian)
14. Malin A. (2011). *Kotitalouden opetustilat osana kehittyvää oppimisympäristöä asumistoiminnot ja opetussuunnitelma muutoksen määrittäjinä.* (Home Economics Classrooms as Part of

Developing Environment, Housing Activities and Curricula Defining Change). Doctoral Thesis. Helsinki, University of Helsinki. (In Finnish)
15. Ots L. (2007). Füüsiline keskkond koolis: käsitlusi ja perspektiive. (Physical Environment in School: Approaches and Perspectives). In Kallas, R., Kuurme, T., Leino, M., Lukk, K. Ots, L., Pallas, L., Ruus, V., Sarv, E.S., Veisson, A., Veisson, M. *Eesti kool 21. sajandi algul: kool kui arengukeskkond ja õpilaste toimetulek.* (Estonian School at the Beginning of the 21st Century: School as an Environment for Development and Pupils Coping). Tallinn: TLÜ Kirjastus. (In Estonian)
16. Piispanen M. (2008). *Hyvä oppimisympäristö. Oppilaiden, vanhempien ja opettajien hyvyyskäsitysten kohtaaminen peruskoulussa.* (Good Learning Environment. Perceptions of Good Quality in Comprehensive School by Pupils, Parents and Teachers). Doctoral Thesis. Helsinki, University of Helsinki. (In Finnish)
17. Pink A. (2010). *Õppekeskkonna rajamine ning nõuded õppevahenditele käsitöös ja kodunduses.* (Constructing the Learning Environment and Requirements for Learning Tools in Handicraft and Home Economics). [online] [17.12.2014] Available at http://www.oppekava.ee/images/0/03/%C3%95ppekeskkonna_rajamine.pdf (In Estonian)
18. Põhikooli riiklik õppekava. (Estonian National Curriculum for Basic School). (2011). *Riigi Teataja* [online] [17.12.2014] Available at https://www.riigiteataja.ee/akt/129082014020 (In Estonian)
19. Randla M. (2012).*Uue riikliku õppekava arendusest ja rakendumisest koolis. Eksperthinnang ainevaldkonnas Tehnoloogia*. (About the Development and Implementation of the New National Curriculum. Expert Opinions in the Field of Technology).[online] [17.12.2014] Available at http://www.oppekava.ee/images/1/1a/Randla_t%C3%B6%C3%B6%C3%B5petus_k%C3%A4sit%C3%B6%C3%B6_kodundus_eksperthinnang_2012.pdf (In Estonian)
20. Salumaa T. (2007). Representation of organisational culture in the process of change by Estonian teachers. Doctoral Thesis. Tallinn, Tallinn University.
21. Sarv E.S. (2011). *Õpetamisteooriad ja meetodid: Õpikeskkonnast*. (Teaching Theories and Methods. About the Learning Environment). Tallinn, Tallinn University. [online] [17.12.2014] Available at https://www.tlu.ee/opmat/ka/opiobjekt/Opetamisteooriad/pikeskkonnast.html (In Estonian)
22. Schreier M. (2014). Qualitative Content Analysis. In Flick,U. *The Sage Handbook of Qualitative Data Analysis*. London: Sage Publications. Pp.170–184.
23. Stewart D.W., Shamdasani P.N. Rook D.W. (2007). *Focus Groups.* Thousand Oaks: Sage Publikations.
24. Tervisekaitsenõuded koolidele (Health Requirements for schools). (2013). *Riigi Teataja*. [online] [17.12.2014]. Available at https://www.riigiteataja.ee/akt/131052013012 (In Estonian)
25. Tynjälä P. (1999). Towards Expert Knowledge? A Comparison between a Constructivist and Traditional Learning Environment in University. *International Journal of Educational Research,* 31/5, pp. 355–442.

Importance of Field Trips in Learning Home Economics and Technologies Curriculum

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Abstract: The general principles of organization the field trips and the importance of the provision of modern and high-quality education are discussed in this article. On the basis of theoretical research, recommendations for teachers how to organize field trips are worked out, as well as the topics and plans of field trips which correspond to the "Home Economics and Technologies" training content and the curriculum model at elementary school are offered. The goal of this study is to raise the importance of field trips at learning and training diverse skills of Home Economics and Technologies in depth.

Keywords: school education, outdoor activities, field trips, subject "Home Economics and Technologies".

Introduction

One of the essential conditions in ensuring a modern and innovative learning process is providing the learning environment that enhances the interest and activity of adolescents. A skilful teacher has to change every environment into a promoting and interesting learning and training place**.** It means that the teachers should be able to generate new ideas, to develop a creative use of materials, to choose and to use the most appropriate methods and a diversity of technologies in order to implement high-quality training content in their professional activity**.** Emphasis should be placed on the organization of such learning and training process that makes teachers more as advisors, co-organizers, coordinators and initiators of training activities.

Already J.A. Komensky (1592-1670) (Draidens, Vosa, 2008, 71) has suggested that teachers help the students to learn by using all their senses. To learn from the things we see, hear, touch and feel, taste, smell and do. A similar opinion was also expressed by J. Dewey (Dewey, 2009 cited by Draidens, Vosa, 2008, 74) calling to involve mind, brain- the entire body, in the exercise, because it composes pupils' knowledge, creative abilities, spiritual repository and experience.

The methods which promote students' learning activities in different social experience forms teach the adolescents how to learn by developing their ability of mind, emotions and will; promote their perception and persistence of information, should be used at elementary schools (Maslo, 1998). Equally important it is to choose methods of problem- solving approach which require more independent and active learning the from the learner, encourage to go into the learning and training content, stimulate creativity, develop independent reasoning skills, responsibility, ability to anticipate changes and adapt to them. (Šmite, 2004). Innovative activity is possible if it is provided with a close relationship between theory and practice, knowledge in real life situations.

D. Kalniņa (2014) considers that the content must be constructed of interdisciplinary subjects where solving real life problems and dilemmas help students to transform the information into knowledge and wisdom of life. All the best methodological approaches are linked by three things: they are fun, fast and give satisfaction.

G. Dryden and J. Voss (Draidens, Vosa, 2008a; Draidens, Vosa, 2008b, 20, 78) mean that training includes relaxation, activity, stimulation, emotion and joy. They therefore believe that today the whole world is like a class in which everyone can successfully learn, especially if it is kind, helpful and generous. The key to learning: it is meaningful, interesting, and motivating; students understand how the world is bound and that it is interesting to learn. Also, students are aware that they are learning in their own interests, expanding their options for action (Vygotsky, 1978; Wells, 1993, Wells, 1999).

Materials and Methods

The explanations of the concepts “outdoor activities”, “outdoor classroom” and “study trip” are given in the theoretical study. Similarly the advantages, disadvantages and requirements of organization of the field trips are evaluated in it. The general recommendations for teachers on high-quality field trip organization are worked out in the practical study. Also the information on field trip sites, two complex field trip plan samples that are prepared in accordance with the subject "Home Economics and Technologies " training content and the curriculum model at the elementary school are provided.

Results and discussion

In the context of the learning environment the concept of an outdoor classroom is used (Cope, Children…, 2007). The essence of the concept is- a limited area in natural environment, which provides integrated classes and activities outside the regular classroom (Limbu, 2012; Andrušaite, Langenfelde, 2010). Concept “the outdoors” is attributed to the interaction between people and the outdoor environment where students are able to use all of their senses, obtaining personal and immediate, direct experience of the real world, encouraging curiosity and imagination (Orien, 1993; Claiborne, Morell, 2011). Only through a direct contact with the environment, students can develop awareness and gain knowledge about the surrounding world around them, develop the necessary skills and promote the progress of global development (Birziņa, 2006). Pupils learn about the reality in reality. M. Bendix and H. Gretoft hall be understood as: about the nature- in nature, about the society- in society and about the closest surroundings- in the closest surroundings (Bendix, Gretoft, 2003 cited by Children in the Outdoors, 2009).

The *work outside* makes it possible for students to develop their skills that can be useful in learning, as well as in their lives, such as information gathering and processing skills, ability to work as one and get involved into a group; to develop experience and being together. Also, using an outdoor trial experience, in-depth knowledge of a particular subject is acquired. Further scientific research and experiments can follow as the logical extension of the simplest outdoor activities. Innovation and different impressions during outdoor classes can become unforgettable events and remain in memory for a long time (Hacking, 1992).

The author believes that the outdoor class and field trips principles are similar and can successfully be used not only in the areas of Natural Science subjects, but also in Home Economics and Technology. As a method field trip has been known for a very long time. It was introduced in 1827 by George Shillibeer (1797-1866) for a Quaker school at Abney Park in Stoke Newington, London, United Kingdom (Limbu, 2012).

The concept "field trip" is very widely explained. Key features:

- complex and diverse form of learning organization that develops students' cognitive interests, broadens their mind;
- attendance of a place usually in a group for cognitive or learning purposes while learning certain program, topic (Pedagoģijas terminu...,2002, 84; Collins English Dictionary, 2014; Macmillan Dictionary, 2014);
- to link theory with practice;
- both teaching and social objectives are being implemented (e.g. not only the knowledge and skills for implementing it are acquired, but also co-operation and fact finding, selecting and using skills are gained)
- extracurricular training and educational form of organization of the program topics, moving from object to object in their natural or artificially created conditions (Verziļins, Korsunska, 1979);
- investigation of an object or phenomenon in natural conditions (Боровицкий, 1955).

The given explanations mean that the field trip is a carefully planned event, which enables the opportunity to get acquainted with, observe and explore a variety of subjects, phenomena and processes, their interaction in natural conditions. Theoretical research suggests that there are several types of tours (Asafreja, 2001; Birziņa, 2006; Andersone, 2007; Stola, 2002):

- according to the teaching target (introductory, current and final);
- according to the length (one hour, one-day and multi-);
- according to the content (excursions in nature, production companies, regional studies);
- according to the topic of learning content (about a certain topic, a number of topics, interdisciplinary, folklore);
- according to the methods (research, inquiry, project, and data mining).

R. Birziņa (2010) describes two approaches to organization the tours: 1) inductive (coming to a common conclusion from certain facts) and 2) deductive (comparing one object to others, identifying the common and distinctive features, only then generalizing and drawing conclusions). Inductive method is more appropriate for explanation of the simplest facts. In the deductive approach the teacher talks about certain regularities or expresses his /her opinion on the subject, and only then mentions the facts confirming these correlations. It should be admitted, that the deductive method can be too complex for the primary school students.

When planning a field trip, the teacher has to schedule a number of organization and procedure stages: preparation, planning, procedure and summarizing the results of the excursion, processing, evaluation, analysis of the collected materials, introspection, and use of the materials for teaching.

Authors in Latvia: R.Birziņa (2006), R. Andersone (2007) and the authors in foreign countries: N.Orien (1993), C.L. Rudman (1994) etc. have studied and described the principles of organization the successful field trips. The findings expressed by the above mentioned authors are summarized in several suggestions.

1. Think carefully about and get familiar (through theoretical and/ or practical research) with observation objects in advance. Better plan to incorporate a limited number of the objects of interest, so that they could be thoroughly explored.
2. A clear route with detailed trip plans, time allocation, observations that should be taken, necessary materials, tools and visual aids, for example: maps, plans, charts, tables - have to be worked out.
3. The aim, objectives and content of the tour have to be set. If necessary, problem questions for the tour programme have to be developed. Making sure that students are theoretically and practically prepared for the tasks.
4. The question about the tour leader (the teacher by himself, a guide or another specialist) should be decided upon. In the case the tour is led by another person, the teacher should discuss the methodology, characteristics, age peculiarities of the students' group and other specifics, as well as the main issues, items, facts and phenomena in relation to the curriculum links.
5. The most appropriate techniques and methods have to be chosen for completing the tasks.
6. The general form of organization the students should be set (frontal, group or individual work).
7. The tasks should be concise and precise (for example, to observe, interview, love), such that the tour participants had the opportunity to work actively, rather than passively watch or listen to. Teach students to observe, describe, analyze, take notes, because all they see and hear cannot be memorised. It is desirable to create worksheets with tasks of different difficulty levels, types and with creative and independent tasks.
8. The form in which the results of a field trip are reflected and summarized should be well considered and prepared (the conclusive negotiation, systematization of the collected material and design in worksheets, presentation). Information about the tasks to be given to students should be provided before the field trip.
9. The approach to evaluation has to be considered and agreed on together with students. Evaluation criteria have to be prepared and students should be informed about them. If students know that their work in the field trip will be evaluated on a scale, they work during the field trips with a greater sense of responsibility.

10. Students who do not participate in the field trip have to be informed about the alternative options in learning the given curriculum links.
11. Before the field trip, a special attention has to be paid to issues of students' security,
12. discipline, behavioural culture and nature protection.
13. Parents have to be previously informed about the field trip, the aims of it, the material expenses and the other issues that are related to the excursion.
14. Before the excursion, the responsible teacher has to submit the written information to the headmaster of the institution about the field trip showing the aim of the excursion, route, length, the list of participants, their age, the way of transportation, the information for communication and the first aid possibilities (Kārtība, kādā..., 2009).
15. After the field trip, the results have to be discussed, and evaluated.

Despite all of the above mentioned and the positive impact of field trips on the organization of high-quality learning activities, the teacher has also deal with potential problems.

In fact teachers have to prepare for the field trip even more carefully than for lessons. It requires a great deal of time and energy consumption. Furthermore, you have to reckon with the school administration and aid of the other subject teachers, because field trips may disturb the usual work at school and lesson plans (Falk, Balling, 1979; Muse, Chiarelott...,1982; Orien, 1993).

Already while planning a field trip the teacher has to predict the possible difficulties and problems and be ready to handle with them. Problems may arise if, for example: the weather is too bad, it is impossible to meet the necessary people, you are not able to find the planned objects, some activities take more time than it has been planned, not all of the students get the same experience, students are unwilling to participate in the activities of the field trip, some problems with discipline or health occur (Andersone, 2007).

The issue of field trip funding is also actual. The teacher must take into account that not all parents are able and motivated to pay the costs.

The same, when a school tour is not properly organized, its pace is not controlled and the results are not considered, time and finances are spent in vain.

If the field trip is not properly organized, its procedure is not under control and the results are not evaluated afterwards, the trip may become a waste of time. Ignorance of the field trip organization principles should not be permissible; otherwise a field trip may turn it into an amusement ride.

It is true that modern technology allows the use of different types of information to be found on web sites. However, lose contact with their real life is one of the important reasons for field trips should be recognized and supported as a teaching method.

Field trips can be organized by the teacher on a variety of subjects as well as practical and scientific research.

They may be especially effective entering or ending a study subject. In cases where the amount of teaching material has been narrowed and ideas and concepts have not become sufficiently clear and specific, study trip allows you to study the subject matter in depth and clarify the confusion.

Students, comparing several objects with each other and on the basis of the observations in exploratory study tours, can learn to draw conclusions by themselves and collect materials for further observation.

Hence field trips help to check and notice the phenomena, which are beyond the classroom, shows learned the importance of theory in practice to students (hands -on), helps to create an overall impression about the subject. They also develop effective learning and collaboration skills; enable experience of all five senses and the use of different methodologies.

A.Tūna (Kompetents pedagogs..., 2013) believes that the interaction (sharing knowledge, experience, feelings and beliefs) leaves a significant impact on students' learning process, forms their knowledge and development.

One of the ways to promote teacher interaction with students is collaboration with colleagues at school and with professionals in surrounding community.

Given fact that the same subject "Home Economics and Technologies" is an interdisciplinary, as it is tested in other subjects acquired knowledge and skills, cooperation is possible with all the curriculum subjects (Pridāne, 2009, 61).

Co-operation is also possible with the surrounding community professional (Kompetents pedagogs..., 2013).

Perhaps that's why teachers from Latvia chose the museum staff for their direct cooperation partners - professionals.

Educational tour in a museum is a traditional and frequently used method. The museum employee desires to stimulate students' interest in various topics and to do it in an acceptable and intelligible manner for the students, using modern techniques and interactive technologies, and it should be appreciated.

A field trip is mutual preparatory work between teachers and museum staff. Good results can be obtained only if teachers, preferably together with students, had previously consulted with the museum staff and purposefully chosen the topic, that is the most necessary for acquiring the learning content and that can be better provided by the museum from its resources at the given moment.

Besides the direct visits to the museums, seeing several museums is also possible virtually. It is a good alternative for students who, for various reasons, cannot participate in the tour personally, but the choice of teaching tasks and the subjects is limited. It is positive that the museum staffs is increasingly familiar with the course content, form thematic measures preparing worksheets with exercises for students. Also, the museum staffs have opened negotiations with the teachers on the best possible way to exchange information. The teacher, together with the museum's staff is responsible for the quality of field trips (Jamison, 1998).

The author has established a good cooperation with the Museum of Decorative Arts and the Design Museum in Riga, where students can gain a comprehensive picture of Latvian applied art history and its modern manifestation.

Thanks to the school and parents support each year 9th grade schoolgirls can visit the museum.

In order the process of getting exhibits research went more qualitatively, teachers, in collaboration with the museum staff, specially prepare work sheets with various independent and creative tasks as well during the preparatory phase, as during the tour, as well as after visiting the museum.

Every time before the tour, it is necessary to clarify questions about the existence of the exhibits in showrooms, about innovations and other specific issues.

A regular business correspondence has been developed the with the museum staff, thus obtaining regular information about exhibitions, seminars, workshops for students and teachers.

Learning outside the traditional school environment – in nature, at the local community, in various local authorities, in private enterprises, in farms etc. - can be very valuable. This makes learning livelier and more authentic. It also gives students the opportunity to meet different people and learn from their experiences.

More than 25 years of work experience has shown that a lot of valuable information and good practice students can gain not only at museums but also in science centres, the best companies in Jelgava, Riga and surrounding areas. Individual entrepreneurs- both artisans and food producers and household goods manufacturers increasingly are showing interest and their desire to popularize their craft and production. An insight in organizing various excursions, in relation to learning content and model curriculum, is given the table 1 (Table 1).

Table 1

Places and organization goals of field trips in subject "Home Economics and Technologies"

Place	Goal of the field trip
Jelgava Museum of History and Art by Gederts Eliass, Riga Museum of Decorative Art and Design and other museums of the surrounding towns and regions Jelgava House of Culture	Gain insight into: - Latvian national costumes (especially of Zemgale region); -tools, devices and instruments used in housekeeping and house holding in different times; -clothing, types of furniture in different eras; - applied arts. -attend exhibitions of decorative and applied arts.
At the artists' workshops	Get acquainted with the types of decorative and applied arts, objects fabrication technologies, materials and craftsmen.
At Latvia University of Agriculture, Institute of Education and Home Economics	Get acquainted with the Home Environment Education student works - in a showroom. Gain an overview of the study program Home Environment in Education (Home Economics and Technology, household economics teaching profession learning opportunities).
Jelgava, Rīga and other enterprises of surrounding towns : Bakery „Lāči", Rīga Milk Processing Plant, Household garbage dump „Getliņi", furniture factory „Nakts mēbeles" etc.	Gain an overview of the Latvian producers: - foods, their diversity, the production process; - clothing, furniture, packaging and other items for manufacturing processes and forms; - cooperation with various service providers: types, costs, quality.
„Latvenergo" Energy Efficience Center	To get acquainted with the latest and most modern household appliances and home furnishing and improvement principles.
Latvian Bank museum „Naudas pasaule"	To deepen their knowledge of financial matters, household and state budgetary relationships, gain insight on cash flow, household financial security and structure of consumption.

Field trips can be organized in both single and multi- subjects within the (package tours). Two field trip plans which were created in collaboration with Latvian language and chemistry teachers can be viewed in Table N 2 (Table 2). The trips are organized several consecutive years, and students have always taken part in them with interest.

Despite the field trip organization principles and methodology can be found in pedagogical literature, the author was not able to find a meaningful approach to the interpretation and evaluation of the student performance during field trips.

That's why the further research could be linked to elaboration of evaluation principles and criteria. This raises important questions:

1. How to evaluate the students work during the field trip and if it is necessary to do it?
   Possible approach:
   - motivation (learner's involvement in planning, organizing);
   - benefits (understanding the topic - the knowledge, skills).
2. Which forms of assessment (formative or summative) are the most effective for the evaluation?

Table 2

Two package field trip examples

Form	Form 8	Form 9
School Subjects	Home Economics and Technologies Latvian Language	Home Economics and Technologies Chemistry
Topic	Catering establishments in Jelgava	Garment care facilities in Jelgava
Subtopic	Healthy eating opportunities for public catering establishments.	*Garment care types and costs*
Goal	To evaluate the food variety, quality and presentation in the writing culture (menus, titles) in Jelgava catering establishments.	Obtain a comprehensive picture of dry cleaning service types technologies and costs in Jelgava.
Overall objectives	1Visit caterers. 2. Discover the range of dishes. 3. To evaluate compliance of the dishes with healthy nutrition conditions. 4. Evaluate the menus' and products' name correspondence to the language norms.	1. Obtain information about dry cleaners' point places and costs in Jelgava. 2. Visit dry cleaner's. 3. Get acquainted with clothing and other item cleaning technologies.
Stages and aims of field trip process		
1. Before the tour stage	1. Get acquainted with the layout of the dishes on the menu. 2. Repeat conditions of healthy diet. 3. Create a list of your catering establishments that are worth seeing. 4. Form groups. 5. Clarify the groups' objectives in public catering. 6. Agree on the safety conditions during the field trip.	1. Find out which cases require dry cleaning services 2. To study how the chemical cleaning is located in Jelgava. 3. Form groups. 4. Clarify the objectives in dry cleaner's in groups. 5. Agree on the safety conditions during the field trip.
2. While the tour stage	1. Get acquainted with the types of dishes and their costs. 2. Evaluate the names of dishes' and the label writing's correspondence to the language norms. 3. Interview stuff about the most popular dishes.	1. Get acquainted with the dry cleaning work costs. 2. Explore what clothing and other items are taken in for cleaning and which items are good for cleaning technologies. 3. Interview the staff.
3.After the tour stage	1. Evaluate food according to healthy diet conditions. 2. Prepare recommendations for improvement the menu assortments. 3. Do a self-assessment of the work and cooperation in the group. 4. Draw up a report on the worksheet. 5. Present the results in groups.	1. Explore alternative ways of stain cleaning, compare the quality and cost and make recommendations. 2. Do a self-assessment of the work and cooperation in the group. 3. Draw up a report on the worksheet. 4. Present the results in groups.

Conclusions

One of the essential conditions for a modern and innovative learning organization is adolescent cognitive interest and activity stimulating learning environment.

Nowadays the issue about outdoor lessons is raised- a place where the students:

- gain direct experience of the real world,
- are helped to notice and examine phenomena which can not be implemented in the classroom,
- are showed the importance of the learned theory in practice,

- are deepening the knowledge in a particular subject,
- are encouraged to use their curiosity and fantasy, and all of their senses,
- learn to operate and integrate into the group.

The principles of outdoor activities are in tune with the principles of field trips and are successfully used in Home Economics Education at a primary school.According to the explanations given in the literature, a study trip is a carefully planned event that enables natural conditions to meet, observe and explore a variety of subjects, phenomena and processes and their interaction.

Teacher has to prepare for the field trips more carefully than for the lesson, taking into account the above mentioned principles of organization a successful field trips in the article and anticipating problems, possible complications, he/she has to be prepared to deal with them.

One of the ways to promote teacher's interaction with students is collaboration with colleagues in the school and the surrounding community professionals. This makes learning more valuable, livelier and more authentic, enables students to meet with a different people and from their experience. In collaboration with colleagues in the school it is possible to organize interdisciplinary field trips within several school subjects about a single or multiple related topics. Since "Home Economics and Technologies" is an interdisciplinary subject, cooperation is possible within all the subjects that are included into the curriculum.

Learning outside traditional school in the subject "Home Economics and Technologies" may take place: in nature, in the local community , at science centres, museums, various municipal institutions , private enterprises , farms in Jelgava, Riga and surrounding areas.

Field trips are an essential component of reflection and evaluation, so further studies could be related to elaboration higher quality evaluation principles and criteria.

Bibliography

1. Andersone R. (2007). *Izglītības un mācību priekšmetu programmas* (Education and Subject Standart). Rīga, RaKa, 202 lpp. (in Latvian)
2. Andrušaite A. Langenfelde M. (2010). *Kas ir āra klase un kāda ir tās loma vides izglītībā?* (What is an outdoor classroom and what is its role in environmental education?). [online] [19.12.2014]. Available at http://www.daba.gov.lv/upload/File/Publikacijas/ROKASGR_Ara_klase.pdf (In Latvian)
3. Asafreja A. (2001). *Ekskursija- mācību forma* (Field trip as a Training Form). Rīga, Raka,128 lpp. (in Latvian)
4. Bendix M., Gretoft H. (2003). Slip de mud! –en vejledning om udeskole og naturklasse. (Release the mud! A Guide on outdoor education and of class.) Kø-benhavn, Skoven i Skolen. (In Danisch)
5. Birziņa R. (2006). *Tradicionālās mācību metodes* (Traditional Teaching Methods). [online] [27.12.2014]. Available at http://skolai.daba.lv/proj_materiali/macibu_materiali/b/Tradic_macmetodes_prezent_rb_b.pdf (In Latvian)
6. Birziņa R. (2010). *Mācīšanās ekskursijā* (Learning in field trip). [online] [24.12.2014]. Available at http://profizgl.lu.lv/mod/book/view.php?id=20423&chapterid=5151 (In Latvian)
7. *Children in the Outdoors* (2009). A Literature review, Dr. Sarah-Anne Muńoz Sustainable Development Research Centre, Horizon Scotland, The Enterprise Park, Forres, IV36 2AB, SDRC.
8. Claiborne L., Morell J., Bandy J., Bruff D. (2011). *Teaching Outside the Classroom*. Online Teaching Guide Series. VU Center for Teaching. [online] [27.12.2014]. Available at http://cft.vanderbilt.edu/teaching-guides/teaching-activities/teaching-outside-the-classroom/
9. Collins English Dictionary. [online] [27.12.2014]. Available at http://www.collinsdictionary.com/dictionary/english/study-tour?showCookiePolicy=true
10. *Cope, Children, Outdoor, Participation, Environment:* A Guide on How to Engage Children in Issues Regarding Health, Nature, Environmental Problems and Outdoor Life (2007). Publisher: Nordic Council of Ministers, 62p.
11. Dewey J. (2009). *Democracy and Education.* Wilder Publications, p. 312.
12. Falk J., Balling J.D. (1979). *Setting a neglected variable in science education: Investigations into outdoor field trips*. Edgewater, MD: Smithsonian Institution, Chesapeake Bay Center for Environment Studies. Final report.

13. Hacking E. (1992). *Geography into Practice*. Longman group, UK. Edited by Daniella Tilbury, Michael Williams.
14. Jamison E. (1998). *Field Trip Qualitative Research*. St. Paul, MN: Science Museum of Science Museum of Minnesota and Minnesota Historical Society. Unpublished research report.
15. Kalniņa D. (2014). *Mūsdienu skolotājs mūsdienu skolā* (Modern Teacher in Modern School). PedaT038: Pedagogu vispārējās kompetences pilnveide pedagoģiskā procesa īstenošanai (Development of teachers' overall competence for the implementation of the educational process) Latvijas Universitāte, Rīga. [online] [24.12.2014]. Available at http://profizgl.lu.lv/mod/book/view.php?id=12113&chapterid=3592 (In Latvian)
16. *Kārtība, kādā nodrošināma izglītojamo drošība izglītības iestādēs un to organizētajos pasākumos* (2009). (Procedures for Ensuring Safety of Students in Educational Institutions in Events Organized by Them, Section "Excursion, Hike and Walk Organization ") MK noteikumi Nr.1338, Rīgā, 24.11. 2009. [online] [27.12.2014]. Available at http://likumi.lv/doc.php?id=201106 (In Latvian)
17. *Kompetents pedagogs 21.gadsimtā. Kvalitatīvas pedagoģijas principi.* **(**2013). Tuna A. coauthor. (The competent teacher in the 21st century. The principles of qualitative pedagogy.). Izglītības iniciatīvu centrs. [online] [24.12.2014]. Available at http://www.iic.lv/wp-content/uploads/2013/03/kvalitativas_pedagogijas_principi_lv2.pdf (In Latvian)
18. Limbu P. (2012). *Teaching Strategy: Field Trip Strategy*. My eProgressive Portfolio on END. [online] [24.12.2014]. Available at http://eprogressiveportfolio.blogspot.com/2012/06/field-trip-strategy.html
19. Macmillan Dictionary. [online] [26.12.2014]. Available at http://www.macmillandictionary.com/spellcheck/british/?q=study-tou&entrySet=B
20. Maslo E. (1998). Mācību metodes izglītības iestādēs (Teaching methods in educational institutions), *Skolotājs*, Nr.5.,6 (in Latvian)
21. Draidens G., Vosa Dž. (2008a). Neierobežots. Jaunais mācību apvērsums un septiņas atslēgas tā veicināšanai. (Unlimited. The new learning revolution and the seven keys to facilitate it). [online] [27.12.2014]. Available at-https://macibuapversums.wordpress.com/gramata/ (In Latvian)
22. Draidens G., Vosa Dž. (2008b). Tas ir Globāls. Neorobežotas iespējas. (It is Global. Unlimited Possibilities). Prezentācija. [online] [27.12.2014]. Available at https://macibuapversums.files.wordpress.com/2009/08/ac-book2.pdf (In Latvian)
23. Muse C., Chiarelott L., Davidman L. (1982). Teachers' Utilization of Field Trips: Prospects and Problems, *Clearing House*, 56(3), pp.122-126.
24. Orien N. (1993). A Model for the Development and Implementation of Field Trips as an Integral Part of the Science Curriculum, *School Science and Mathematics*, *Vol.93*(6), pp. 325-331.
25. Pedagoģijas terminu skaidrojošā vārdnīca (2002). (Thesaurus of Pedagogy). Rīga, Zvaigzne ABC. (in Latvian)
26. Pridāne A. (2009). *Dzīves kvalitātes principa īstenošana mājturības izglītībā pamatskolā* (Implementation of the Principle of Life Quality in Home Economics Education at Basic School). Promocijas darbs (Doctoral Thesis). Jelgava, Latvija,160 lpp. (in Latvian)
27. Stola I. (2002). *Ekskursijas dabā* (Excursions in nature). Rīga, Raka, 148 lpp.(in Latvian)
28. Šmite A. (2004). *Izglītības iestādes vadība* (Administration of an Educational Institution). Rīga, RaKa, 254 lpp. (in Latvian)
29. Rudman C. L., (1994). A review of the use and implementation of science field trips, *School Science and Mathematics*, Vol. 94, pp. 138-194.
30. Wells G. (1993). Working with a teacher in the zone of proximal development: Action research on the learning and teaching of science, *Journal of the Society for Accelerative Learning and Teaching*, 18, p. 127–222.
31. Wells G. (1999). *Dialogic inquiry: Towards a sociocultural practice and theory of education*. New York: Cambridge University Press.
32. Verziļins N., Korsunska V. (1979). *Bioloģijas mācīšanas vispārīgā metodika* (The general methodology for teaching Biology). Rīga, Zvaigzne, 341 lpp. (in Latvian)
33. Vygotsky L. (1978). *Mind in Society*. The Development of Higher Psychological Processes. Cambridge: Harward University Press.
34. Боровицкий П. Н. и др. (1955). Краткий *справочник преподователя естествознания* **(**Quick Reference teacher of natural science). 2-е перерабоатнное издание, Москва, Высшая школа, 336 с. (in Russian)

Technology Education in Lithuania - a Tool for Creating a Sustainable Future

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Abstract: In Lithuania, the subject of Technologies was introduced to school curriculum in 2003. The subject became one of the important subjects that develops pupils' technological literacy, prepares for their future profession and gives the tools for independent responsible living. The subject aims is introducing pupils to historical development of Technologies, relations with other sciences, evaluating the impact of Technologies on the culture and social environment as well as on traditions and national identity. The subject of Technologies is an integrity of creativity and production that prepares pupils for today's modern society. The purpose of the article is to reveal purposes of Lithuania's technology education as a tool to seek the development of sustainable society. The historically change of Technologies (earlier handworks) subcect's content and aims were analysed. The content of the subject of Technologies as an educational prerequisite when seeking the development of sustainable society was examined. The subject of Technologies in Lithuania is an appropriate educational space for the development of the culture of consumption of pupils and the concept of the quality of life to form.

Keywords: Technologies, handwork, technology education, sustainability, secondary education.

Introduction

Relevance. When ensuring a quality of education and in order to respond to the needs of the society and the main strategic Lithuanian documents, the requirements for general education are extremely high. The subjects taught are constantly renewed while seeking space for the implementation of both objectives set by global education and national priorities. One of the general education subjects the content concept of which particularly depends on the needs of society development tendencies in Lithuanian general education is Technologies. The purpose of technology education is to develop general and technological competencies which are the totality of knowledge and understanding, skills and attitudes that assists the student in acquiring the foundations in technological literacy that are necessary for every man in a constantly changing socio-cultural environment (Vidurinio ugdymo..., 2011). Technological development poses a challenge to create conditions for pupils to know technological developments in historical context, the relations of Technologies to other sciences, assess the influence of Technologies on culture, technological change in the social environment. Technology education is perceived as the totality of a creative and production process (Pradinio ir pagrindinio..., 2008). The goals of technology education also responds to the provisions foreseen by The State Progress Strategy "Lithuania 2030" (Lietuvos pažangos…, 2012) – to strengthen the historical awareness and self-esteem of citizens, encourage the cultural and artistic expression of different types when renewing the repertoire and symbolism of national culture, educational programmes and public events of the state and ensuring the preservation of cultural heritage, the objects of national heritage and, at the same time, adapting it to the needs of society intelligently.

Traditional culture is a set of creations based on peoples' traditions, the people living in a particular socio-ecological environment, where this set is recognized as their heritage, reflects their identity and the general values of that community and is passed from one generation to another with some modifications (Siliņa-Jasjukeviča, 2013). Cultural heritage is an integral part of the identity of a state and its citizens, one of the most important guarantees of national security (Lietuvos kultūros..., 2010). Therefore, one of the main objectives ensuring sustainable future of the country is to preserve national self-awareness and cultural identity of the people of the country, meet the challenges and opportunities of globalization. It is necessary to think about sustainable development not only from an economic or ecological point of view. Culture as the resource for sustainable development can be used to achieve economic, social, environmental and educational objectives. It also possesses symbolic features and meaning, which is the foundation for an individual's cultural affiliation. Culture is an

objective and an instrument at the same time (Siliņa-Jasjukeviča 2013). Thus, a subject in the school's programme that educates respect for national traditions and assists in transmitting them from generation to generation is extremely necessary. Although the purpose of the subject of Technologies is to teach Technologies to the young generation, pupils understand them while learning traditional crafts, the content of the subject historically has always been permeated with national traditions, and one of the purposes has always been the preservation of national identity.

In Lithuania, the concept of technology education, general programme of Technologies and education standards entered into force in 2003 and substituted the subject of hanwork and domestic culture that had been taught until then. The area of Technologies was formed, mandatory programmes for primary and lower secondary education was created (Lietuvos bendrojo..., 2003). The programme Technologies was renewed in 2008 (for the secondary education in 2011) and is in force to date (Pradinio ir pagrindinio..., 2008; Vidurinio ugdymo..., 2011). Technology education in Lithuania is derived from handwork education which is examined by scientists as a prerequisite for the enhancement of traditions, labour culture and esthetics (Galkauskas, 2001). Although a new approach reflecting the orientation of technology education towards the reality of post-industrial trend taking towards technological creation has been forming in the scientific discourse over the last two decades (Statauskienė, 2006), the subject of Technologies remains the educational space of nation's traditions where a national heritage and ecological awareness are promoted.

The purpose of this article is to reveal purposes of Lithuania's technology education as a tool to seek the development of sustainable society.

The object of the article is technology education as a tool for sustainable future.

Tasks:

-to analyse how the content of Technologies (earlier Handworks) changed historically;

-to examine the content of the subject of Technologies as an educational prerequisite when seeking the development of sustainable society.

Methodology

A content analysis method of education documents and scientific literature was used in the article. All programmes of Handwork and Domestic Culture/Technologies from 1992 were examined. The reviews of and scientific literature of the subect of Technologies derivation were summarised. The content of current Technology subject in General Programmes of Primary and Basic Education as well as the aims of the subject were assessed in order to explore the prerequisites for sustainable education.

Results and discussion

The origin of technology education

In Lithuania, the subject of Technologies in programmes of general education is derived from the school subject of Handwork which at the end of the 19th and the beginning of the 20th century was introduced into the content of the Lithuanian general education (Mikėnas, 1979). In 1928, the subject which was named as Handwork in the content of general education was aimed at accustoming pupils to an active physical activity, introducing them to fine arts, applied arts industrial production. Since 1932, a great deal of attention was focused on examining agriculture, livestock production and small branches of agriculture in the profiled programmes of agricultural classes, pupils learned to do agricultural works in experimental parcels of their school (Vaičiulienė, 1973). In 1935, the further reform foresaw the teaching of handwork and domestic work only for girles and only in the 1st–4th classes of gymnasium. The content consisted of knitting, weaving, embroidery, sewing, and household ir domestic works and culinary works (Urbietis, 2005). In 1936, a new teaching plan and new education programmes were issued. New plans and programmes increased the amount of hours for the subjects of science and handwork. Separate versions were created for town and village schools. More attention was dedicated to calculation and handwork at town schools, whereas agriculture was given greater attention at village schools (Vaičiulienė, 1973). In 1954–1955, Handwork was begun to be taught in the 1st–4th classes, since 1955–1956, practice works were commenced to be taught in the 5th–6th classes, and, a year later, in the 7th class as well. P. Urbietis (2005) identifies that as the

period of politechnical and industrial training which lasted from 1953 till 1989. Boys were taught wood and metal works, whereas girls were taught domestic works. In 8th–9th classes, practical work of agriculture, the basics of automotive science, electrical engineering were allocated; pupils were purposefully sent to factories and agricultural enterprises for practical training. Since 1961, the purpose of Handwork teaching was to develop skills and competencies of pupils to work wood and metal, perform electrical installation, introduce pupils to locksmithery and assembly works, the working of wood and metal, turning and cutting machines, domestic works, and agro-technics of the most important agrocultural crops. Pupils had to obtain knowledge about mechanisms and machinery, electrical appliances and learn how to use them. It was the beginning of industrial – technological preparation of pupils. The purpose of this teaching was to provide at least the lowest qualification of the worker. The main focus during the next three decades was devoted to industrial training (Urbietis, 2005).

In 1989, already prior to the restoration of the independence of Lithuania, Prof. M.Lukšienė and a band of like-minded souls – pedagogues, scientists, people involved in culture – prepared the Concept of the National School. She called to take care of the survival of the nation and its identity, create such educational system which would nurture independent, civic and cultured people (Tautinė mokykla, 1989). In 1992, Experimental Handwork and Domestic Culture Teaching Programmes were prepared and approved by the Ministry of education (Galkauskas, 2004). At that time, the content of handwork and domestic culture was officially differentiated according to sex: domestic works were asigned to be taught to girls (the programme provided the teaching of nutrition basics, the preparation of dishes, the modelling, construction and sewing of clothes, the organizing of home economics and the basics of economy, handicrafts, domestic culture), whereas technical works were asigned to be taught to boys (the programme provided the teaching of wood works, metal works, electrotechnical works, home environment management works). The programmes emphasized the ability of pupils to analyse reality and environment, solve problems and understand the characteristic changes of today's society and actively influece them. There was an attempt made to teach pupils how to use different Technologies and information bases, critical thinking was nurtured and there was an attempt made to develop creativity. Those were the last general education programmes in which the content was described in detail (Urbietis, 2005).

In 1994, new Lithuanian programmes of general education schools read, “Work and domestic activities are two closely inter-related areas of life that are linked to the satisfaction of the essential needs of the man and society. Meaningful work nurtures physical, mental and spiritual powers, developes creativity, a physically and spiritually healthy, harmonious personality. High personal standards and outstanding workplace culture of the society are one of the most important factors determining the material well-being of the man and the country. They assist the man in creating proper living conditions, cosy, esthetic and healthy living environment and nurture domestic culture” (Lietuvos bendrojo..., 1994). Handwork and Domestic Culture Programme of that time foresaw to develop a person's ability to accept and creatively develop ethnocultural traditions at home and work. Handwork education had to stimulate the development of the responsibility for the domestic culture of the country perceiving it as the part of the whole of the culture of the nation. The programme foresaw the integration of historic and cultural traditions of our nation and global production and business into the content of handwork. Girls would learn to prepare the festive table; they had to get acquainted with national rites and traditional dishes. When working with a textile they would get acquainted with the Lithuanian national costume and its place in today's life and the like. During the learning of household works pupils were encouraged to creatively nurture national traditions in a home decoration and finish. Wood and metal works had to introduce boys to wood treatment and the traditions of metal works and the works of Lithuanian folk artists.

General programmes of Handwork and Domestic Culture that were prepared and approved in 1997 differed essentially from the previous ones. The programmes revealed the concept of the subject, the objectives and tasks of handwork education, didactic provisions of the realization of programmes. For the first time the content of the subject was presented in an abstract way without specifying topics in detail. The content revealed only the content of the subject, pointed out the areas of the subject and the guidelines for their implementation: domestic economics, nutrition, works with a textile, threads, yarn;

wood and metal works. The programme also foresaw integral knowledge of economics, ecology, healthy lifestyle, graphic design, technical graphics and artistic creativity. Pupils were taught to create a useful product, know their environment "the esthetics of which has to become a very significant part of handwork–technological education, the acquaintance of the future producer and consumer with the creation of things and environment" (Lietuvos bendrojo..., 1997).

In 2003, new general programmes and education standards were approved in which handwork and domestic culture was referred to as Technologies. The objective of the programme of Technologies is "to create the prerequisites for pupils to develop the basics of technological literacy, i.e. nurture value-related attitudes and key competencies that are necessary for everyone <…> in ever-changing socio-cultural environment, to be able to use simple Technologies as users, experience the diversity of the search for creative problem solving and the joy of their solution, develop positive attitudes towards continual change of Technologies" (Bendrosios programos..., 2003). Throughout the process of technological education, pupils are prepared as future family members, citizens that are able to flexibly adapt in the changing society, prepared for their own further development (Urbietis, 2005). Although the subject was renamed to Technologies, in the content, the orientation towards the education of the consumer remained, whereas industrial production was introduced only in the 9th-10th classes. In 2008, the programme of Technologies was renewed. The renewed programme of Technologies maintains, "It is important for pupils to have the knowledge of the impact of emerging or developed Technologies on nature, the man, material environment, understand how to assess the benefits of Technologies and their possible negative impact on personal and societal health, security and welfare" (Pradinio ir pagrindinio..., 2008). The subject of Technologies combines theoretic knowledge of other subjects in the practical activity. It aims at strengtening the motivation of those pupils who are lower achievers, developing students' technological literacy, whereas in senior classes, 9th-10th, introducing branches of Lithuanian economy and professions to pupils.

Thus, the name of the subject historically changed from Handwork to Domestic works, whereas those were succeeded by Technologies. Although during this long period of time the main goal of the subject was to introduce professions to pupils, prepare them for the work in the industry, however, pupils were always practically prepared for independent living in their family, manage household, nurture national culture and traditional crafts.

The content of technological education – a tool for creating a sustainable future

In the part of Technologies in the General Programmes of Primary and Basic Education (2008), it is maintained, "As the needs of the society and individual change, Technologies also change – the methods and means of production processes, the systems of material and human links and regularities that are at work in technological processes, decisions made by the man, the knowledge of "know-how" in the nature–man–material environment system. The further development of Technologies depends on man's self-determination and environmental factors influencing him: cultural, economic, environmental protection-related and social. It is important for pupils to have the knowledge of the impact of emerging or developed Technologies on nature, the man and material environment, understand how to assess the benefits of Technologies and their possible negative impact on personal and societal health, security and welfare" (Pradinio ir pagrindinio..., 2008).

The subject of Technologies is taught from the 1^{st} to the 10^{th} classes. In primary classes, 1^{st}-4^{th}, Technologies is taught together with Fine Arts. In 5^{th}-8^{th} classes, the mandatory content consists of nutrition, textile, construction materials and electronics. The pupils of 5^{th}-8^{th} classes learn designing, information search, the accumulation, application and presentation of information, resistant materials, their application, the kowledge of technological processes, work performance process and the presentation of results. They search for information about historical, cultural traditions of national crafts and business (Pradinio ir pagrindinio..., 2008).

General programmes of Technologies also respond to the challenges of globalization – to get prepared for the labour market: in order to motivate to decide what Technologies to study and where after school, in the 9^{th}–10^{th} classes, pupils choose the programme of Technologies, try their creative and practical abilities, get acquainted with technological processes, professions, branches of economy

(Mokymosi krypčių..., 2008). In 9th-10th classes, Technologies is not manadatory. In technological prophile schools, pupils choose out of six possible areas of Technologies: nutrition, textile, construction materials, electronics and industrial design. Pupils get acquainted with the world of labour, the business environment, they learn about real tendencies of the development of the branches of economy in their region, promising branches of economy in Lithuania, therefore, they are able to reasonably choose attractive modules of the programmes of Technologies in senior classes, develop technological competencies. In 11th-12th classes, pupils choose modules out of 6 optional trends of Technologies: Textile and clothing; Tourism and nutrition; Construction and wood processing; Business, management and retail trade; Mechanics and mechanical repair.

When learning according to the chosen teaching programme of Technologies, pupils deepen their knowledge about the branch of Lithuania economy which interests them. Pupils perform project works at school and are able to take the examination. About 20 per cent of the time foreseen in the programme of Technologies is spent to get acquainted with with the chosen branch of economy (part of the content) using active (self-) learning methods and information technologies. About 80 per cent of the foreseen time is spent for the development of the knowledge of the branch of economy chosen by a pupil or the branch of a module and skills, and project works at school. In the education process, these areas of the activity partially overlap, therefore, such pupils' activity breakdown is only conditional, assisting the teacher in getting aproximatelly oriented what should be the scope of the programme (Vidurinio ugdymo..., 2011). Technologies is especially relevant to pupils who encounter difficulties seeking to achieve the satisfactory level of learning outcomes in other taught subjects (mathematics, the Lithuanian language, history, foreign languages, sciences) – they are allowed to choose those modules of these subjects that are oriented towards practical activity (Inetegruoto technologijų..., 2007).

In General Programmes of Secondary Education (2011), when presenting the guidelines for technology education, it is maintained: in preparation for the challenges of modern society, it is important for pupils to have the knowledge of the impact of human decisions, understand "know-how" in the system *nature–man–material environment* <...>, to have the knowledge of the impact of emerging or developed Technologies on nature, man, material environment, understand how to assess the benefits of Technologies and their possible negative impact on personal and societal health, security and welfare.

Thus, the subject of Technologies is not only educational space for the process of technological creativity, but also an important place for conveying values and self-education in which the interests of the producer and consumer collide, business ethics is revealed, the basics of responsible business are taught. The task of the teacher is to create conditions that such a personality would get developed who chooses to use in a cultured way and creates wisely. Technologies still is and has to remain the environment for national identity and intercultural (self-) education, the space where pupils acquire life-skills, get acquainted with the challenges of the global world and learn to create a sustainable future.

The content of Technologies responds to the Programme of the Fundamentals of Lithuanian Ethnic Culture for General Education Schools and remains the key practical subject in which ethnoculture and crafts are nurtured and national identity is developed (Čepienė, 2009).

However, it should be noted that the subject of Technologies that is oriented towards production–creating is gradually losing its mision of the educator of pupils' national identity and the nurturer of cultural heritage in comparison with the previous content that was until 2003. The present content of Technologies is more oriented towards the development of the consumer–producer competencies than towards traditional cultural values (Inetegruoto technologijų..., 2007). As The National Education Strategy for 2013–2022 affirms, "at the present time, the need for cultural self-expression creates enormous pressure on formal education which is often not capable of meeting all the needs and expectations without creating the danger of formal content overload." It is a very serious starting point for the review of educational content and the development of the concept of technological education taking into consideration the state policy and the need of today's society to retain what many nations are desperately attempting to recover – national identity (Valstybinė švietimo…, 2012).

The content of the subject of Technologies covers not only technological processes, their impact on the environment, but also social effects of globalization. Technologies, which conquer global markets and young people's minds, can become a starting point and a practical, fundamental space for the knowledge of cultural diversity, serve as an eye-opener for mutual learning, teach sensitivity to the problems of a globalization era. When teaching Technologies, we inevitably have to discuss global ethics, sustainable development, nurture and self-nurture respect and trust to each other as well. We have to commence to look at the growth of a multicultural society not as the reason for problems to arise, but as the emergence of the possibilities for intercultural education. The development of new Technologies open up such possibilities: without leaving their desks, pupils can get aquainted with other cultures, their people's life style, discuss all the questions with them, including those on globalization and national identity.

The tasks of the subject of Technologies are consistent with the Lithuanian National Strategy for Sustainable Development which affirms, "The development of civic engagement, environmental education and the promotion of the lifestyle that is environmentally friendly and health-friendly have to play their due role in education at all levels. <...> Particular attention has to be paid by the state to the recovery and preservation of rural traditions and heritage" (Nacionalinė darnaus..., 2009).

The subject of Technologies – space for learning the quality of life and the culture of consumption

Education for sustainable development is required for young people to be able to make deliberate choice in favour of the creation and maintenance of the world, that both they and the next generation will be considered to be suitable for life and work. This means to give students the knowledge, build skills, responsibility and action competence of life for the long period of time (Bonn Declaration, 2009). One of the key tools for gaining these competencies is consumer education. Consumer education offers several benefits to individuals; it: (1) encourages critical thinking; (2) imparts life skills that contribute to success in everyday living; (3) promotes self-confidence and independence; (4) fosters broadly accepted values; and (5) improves the quality of life (Knapp, 1991).

The quality of life of the man is described by the possibilities to satisfy his various needs. Human needs (for food, clothing, house and education, culture, self-expression, health and recreation, participation in the life of the community) are determined by very many factors: the economy of the country in which the man lives, environmental policy, culture, religion et alia. However, these areas of life are also the result of human activity and are constantly influenced by him. Therefore, an active personal position of everyone and a collective position effectively determine the quality of today's life, as well as how we will live tomorrow and how the future generations will live. The key problem of today's consumerist society, that causes irreversible consequences, is living from day to day, i.e. an irresponsible and negligent consumption, and the failure to understand the influence of personal lifestyle on social and economic environment. Thus, the epoch dictates the concept of the subject of Technologies: production for him has to be taught in conjunction with production for others. It is the only way, without losing the pupils' desire to produce, to preserve one of the key Lithuanian identities – crafts and their Technologies. Through the knowledge of consumer demands and the ways of the supply formation, not only does the pupil comprehends a market economy, but also develops his culture of consumption. Having understood the Technologies of how products access to the market (from the raw material to the consumer), consumption attitudes get formed. Therefore, the programme of Technologies is one of the most favourable for integrating the education of the culture of consumption.

The main purpose of the culture of consumption, a better quality of life, will be impossible, if we only educate consumers, but fail to nurture the responsible manufacturer. Therefore, the educational objectives of the subject of Technologies and the culture of consumption at first sight contradictory are the main factor determining the success of the education of the culture of consumption. When the young generation understands that the consumer is the the main unit regulating the market who impacts the amount and quality of production through his choices, whereas the future producer attempts to educate the responsible consumer through his quality goods and safe production Technologies and proper their advertising, we will be able to speak of outstanding culture of

consumption the quality of life. One of the most important evaluation factors have to be designing a product, safety of production and products for the man and the environment, and consumer demand analysis and its application when teaching Technologies. The essence of the concept of Technologies is a man's ability to manage things and tools, but not the man managed by things. It is one of main points of contact between Technologies and the culture of consumption.

Household, change our lifestyle, habits and how that leads to the change of the environment (Sedereviciute, 2007). The possibilities of the integration of Technologies and the culture of consumption are defined in the Integrated Programme of the Education of the Culture of Consumption that was approved by the Ministry of education and science (2007).

Conclusions

In Lithuania, the subject of Technologies is derived from the subject of handwork. The name of the subject historically changed from handwork to domestic works, handwork and domestic culture and, finally, it was named Technologies. The objectives of the subject concept changed from industrial training, preparation for agricultural works and vocational training to teaching how to manage household, create and nurture traditional crafts.

The content of Technologies responds to the Programme of the Fundamentals of Lithuanian Ethnic Culture for General Education Schools (2009) and remains the main practical subject in which ethnoculture and crafts are nurtured and national identity is developed. The subject of Technologies is a proper platform for the education of the youth in order to develop sustainable society. The lessons of the subject of Technologies is an appropriate educational space for the (self-) nurturing of pupils' intercultural competencies.

The subject of Technologies is an appropriate educational space for the development of the culture of consumption of pupils and the concept of the quality of life to form. All of that provide the basis for the creation of sustainable society.

Bibliography

1. *Bendrosios programos ir išsilavinimo standartai. Priešmokyklinis, pradinis ir pagrindinis ugdymas*. (2003). (General Programmes of Secondary Education. Preeschool, Primary and General Education). Vilnius, Švietimo aprūpinimo centras. [online] [27.12.2014]. Available at http://www.upc.smm.lt/ekspertavimas/biblioteka/failai/programos.pdf (In Lithuanian)
2. *Bonn declaration*. Point 8. (2009). UNESCO World Conference on Education for Sustainable Development, Federal Ministry of Education and Research. Bonn, Germany. [online] [29.12.14]. Available at http://www.desd.org/ESD2009_BonnDeclaration080409.pdf
3. Čepienė I. (2009). *Bendrojo lavinimo vidurinės mokyklos etninės kultūros pagrindų mokymo programa* /Pasirenkamieji kursai V–VIII, IX–X klasėms ir profilinio mokymo (-si) pasirenkamasis kursas XI–XII klasėms. Dalyko paskirtis. (The Programm of Ethincal Culture Education for General Education Curriculum. Optional Cources for Grades IX–X and for Profile Grades XI–XII. The Purpose of the Subject). [online] [26.12.14]. Available at http://www3.lrs.lt/pls/inter/w5_show?p_r=2232&p_d=21384&p_k=1 (In Lithuanian)
4. Galkauskas J.K. (2001). Technologijų dalyko patrauklumas. (Desirability of Technologies Subject). *Pedagogika*. T. 55, p. 45–48. (In Lithuanian)
5. Galkauskas K.J. (2004). Rankų darbai kaip mokymo dalykas (istorinis aspektas). (The subject of handwork. Historical aspect). *Pedagogika*, 74. 25–28. (In Lithuanian)
6. *Inetegruoto technologijų kurso bendroji programa ir metodinės rekomendacijos*. (2007). General Programme of Iintegrated Technologies Course and Methodological Recommendations). Švietimo aprūpinimo centras. Vilnius. [online] [29.12.14]. Available at http://www.upc.smm.lt/ekspertavimas/biblioteka/failai/Integruoto_gramos_mr.pdf (In Lithuanian)
7. Knapp J. P. (1991). The benefits of consumer education. A survey report. Yipsilanti, MI: Eastern Michigan University, Consumer Education Center. In: Cheryl A. Mimbs-Johnson C.A., Radford Lewis A. Consumer Economics and Family Resources: Importance of Financial Literacy. *Journal of Family Consumer Sciences Education*, 27 (National Teacher Standards 4). [online] [14.12.14]. Available at http://www.natefacs.org/Pages/v27Standards4/v27Standards4Mimbs-Johnson.pdf
8. *Lietuvos bendrojo lavinimo mokyklos bendrosios programos: I–X klasės.* (1997). (Lithuanian General Programms of General Education School: grades I-X). Lietuvos Respublikos švietimo ir mokslo

ministerija, Pedagogikos institutas. Redakcinė komisija: Ž. Jackūnas, D. Kuolys, M. Lukšienė. Vilnius, Leidybos centras. (In Lithuanian)
9. *Lietuvos bendrojo lavinimo mokyklos programos: projektai*. (1994). (Programmes of Lithuanian General Education Schools: draft). Vilnius: Lietuvos Respublikos švietimo ir mokslo ministerijos Leidybos centras. (In Lithuanian)
10. *Lietuvos kultūros politikos kaitos gairės* (2010). (The Guidelines for the Change in Lithuanian Cultural Policy). Lietuvos Respublikos Seimo 2010 m. birželio 30 d. nutarimu Nr. XI-977. [online] [27.12.2014]. Available at http://www.lrkm.lt/go.php/lit/Lietuvos-kulturos-politikos-kaitos-gaires (In Lithuanian).
11. *Lietuvos pažangos strategija „Lietuva 2030"* (2012). (Lithuanian strategy of progress „Lithuania 2030") Available at http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=425517&p_query=&p_tr2=2 (In Lithuanian)
12. Mikėnas V. (1979). *Moksleivių darbinis mokymas*. (Handwork education for pupils). (Paskaitų konspektas). Vilnius, LTSR Aukštojo ir specialiojo vidurinio mokslo ministerijos Leidybinė tarnyba, p. 101. (In Lithuanian)
13. *Mokymosi krypčių pasirinkimo galimybių didinimo 14–19 metų mokiniams modelio aprašas*. Patvirtinta Lietuvos Respublikos švietimo ir mokslo ministro 2008 m. kovo 15 d. Įsakymu Nr. ISAK-715. (The Description of the Model of Learning Trends Improvement Possibilities for 14–19-year-old Pupils. Approved of the Minister of Education in 2008, 15 of March, order. No. ISAK-715). [online] [26.12.2014]. Available at http://www.upc.smm.lt/ekspertavimas/biblioteka/failai/2008-03-15-ISAK-715.pdf (In Lithuanian)
14. *Nacionalinė darnaus vystymosi strategija*, patvirtinta Lietuvos Respublikos Vyriausybės 2003 m. rugsėjo 11 d. nutarimu Nr. 1160, (National Strategy for Sustainable Development, approved by Government of Lituanian Republic, September 16 , 2009 m. resolution Nr. 1247 edition) (Lietuvos Respublikos Vyriausybės 2009 m. rugsėjo 16 d. nutarimo Nr. 1247 redakcija) (In Lithuanian)
15. *Pradinio ir pagrindinio ugdymo bendrosios programos.* Technologijos. (2008). (General Programmes of Primary and Basic Education. Technologies. Order of the Minister of Education in 2008, 26 Agust. No. ISAK-2433). Lietuvos Respublikos švietimo ir mokslo ministro 2008 m. rugpjūčio 26 d. įsakymas Nr. ISAK-2433. [online] [27.12.2014]. Available at file:///C:/Users/Home/Downloads/pagrindinis_ugdymas_technologijos_bendrosios_nuostatos.pdf (In Lithuanian)
16. Sederevičiūtė Ž. (2007). *Vartojimo kultūros ugdymo integravimas į technologijų pamokas.* (An Integration of Consumer Education in to Tecnologies Lessons). Mokymo ir metodinės medžiaga. Vilnius, p. 64. (In Lithuanian)
17. Siliņa-Jasjukeviča G. A Model For Facilitating Sustainable Traditional Culture in Primary Schools (2013). Proceedings of the International Scientific Conference *Rural Environment. Education. Personality* (REEP). Volume 6. March 20th-21st, 2013, LLU, Jelgava, Latvia, pp. 38 – 45. [online] [26.12.2014]. Available at http://llufb.llu.lv/conference/REEP/2014/Latvia-Univ-Agricult-REEP-2014proceedings.pdf
18. Statauskienė L. (2006). Technologinis ugdymas. Realių pokyčių galimybės. (Technologies education. Possibility for real chnage). *Pedagogika*. T. 82. pp. 85-95. (In Lithuanian)
19. *Tautinė mokykla. Lietuvos bendrojo lavinimo vidurinės mokyklos koncepcija.* (1989). (National School. The Conseption of Lithuanian School of General Education). [online] [2014.10. 24]. Available at http://www.smm.lt/uploads/documents/Veikla_strategija/svietimo_reformos_pradzia/tautine_mokykla.pdf (In Lithuanian)
20. Urbietis P. (2005). *Darbinis (technologinis) ugdymas Lietuvoje bendrojo lavinimo mokykloje (1918-2003)*. (Handwork (Technologies) Education in Lithuanian General School) Šiauliai, Šiaulių universiteto leidykla. p. 59. (In Lithuanian)
21. Vaičiulienė A. (1973). *Darbinis mokymas kaimo vidurinėse mokyklose*. (Handwork education in rural schools). Metodinė medžiaga. Vilnius, Pergalė. 136 p. (In Lithuanian)
22. Valstybinė švietimo strategija 2013–2022 m.: tikslai, problemos, tobulinimo kryptys (2012). (The National Education Strategy for the period 2013-2022: goals, problems, improvement directions). Švietimo problemos analizė, October No. 17 (81). (In Lithuanian)
23. *Vartojimo kultūros ugdymo integruojamoji programa.* (2007). (Integrated programm of consumer education) Parengė: Sederevičiūtė Ž. Juškelienė V., Motiejūnaitė O., Vitėnienė I., Gerulaitis V. Vilnus. p. 64. (In Lithuanian)
24. *Vidurinio ugdymo bendrosios programos. Technologijos* (2011). Lietuvos Respublikos švietimo ir mokslo ministro 2011 m. vasario 21 d. įsakymas Nr. V-269 (General Programms of General Education. Technologies. Order of the Minister of Education in, Fabruary 21, 2011. No. V-269) [online] [2014.11. 09]. Available at http://portalas.emokykla.lt/bup/Puslapiai/vidurinis_ugdymas_bendrosios_nuostatos.aspx (In Lithuanian)

Measure Adopted by Homemakers in the Management of the Domestic Energy within Households of the Abia State

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Abstract: The study investigated the measures adopted by homemakers in the management of domestic energy within households in urban and rural areas of Abia State. Specifically, the study identified the various sources of domestic energy used within households. Also the study determined the measures taken by home makers to improve the use of the domestic energy. Two research questions and one hypothesis tested at 0.05 level of significant guided the study. The study adopted the descriptive survey research design. The study was carried out in Abia State of Nigeria. The population of the study comprised of 442,693 households in the area of the study. The sample size was 400 homemakers who were purposefully drawn from the population. Questionnaire was used for the data collection. The instruments were face validated. Internal consistency of the instrument was 0.89. Data were analyzed using means for research questions while ANOVA was used to test the hypothesis at 0.05 level of significance. The Scheffe's post hoc test was used for comparison of means of items that were significantly different. The findings include 20 sources of domestic energy and 40 measures taken to improve domestic energy management practices within urban and rural areas of Abia state including the use of pressure pots to cook hard foods, soak cereals and pulses overnight to soften then, use thermostat to control temperature, use energy saving devices like microwave, bake large quantities of foods at a time, use dishwasher when filled to capacity, use sensors or timers on outside lights, use a timer to avoid wasting energy, do not pre heat the oven for too long, use correct size of pans, use an air conditioner an hour or less every day among others. The findings revealed that when good measures are adopted it makes the homemaker to be efficient in using the domestic energy, it also help the homemakers in the effective maintenance of the households, proper measures reduces the cost of running the households. Based on the findings, the following recommendations were made, home makers should use the source of domestic energy that they are conversant with, the three tiers of government should make domestic energy affordable, available and accessible to the urban and rural homemakers. Government should create awareness on the dangers of domestic energy mismanagement because people need a basic understanding of how each of these appliances and activities uses energy; strategies for improvement of the use should be encouraged.

Keywords: management, measures, homemakers, energy.

Introduction

In the olden days, before the advent of civilization, homemakers depended on a source of domestic energy for household activities. Also, with the advent of civilization, they still rely on a device as a means of generating energy needed for the household activity. Thus, the above information shows that from the pre-civilization era, till date, homemakers have been accessing their domestic energy needs through a source. Energy sources are grouped into non-renewable sources such as biomass, solar and biofuels. Secondary sources such as electricity, solar and hydropower. The sources of energy for household activities are electricity, liquefied natural gas, kerosene, charcoal, fuel wood, solar power and petrol. A.Kuper and J.Kuper (2004) said that the ability of any society to survive depends on its continuing access to energy in an appropriate qualities, quantities and its acceptable cost, so domestic energy is one of the most important utilities households need to achieve their goals.

Domestic energy is the energy used in the home on the various appliances used within the households. These are also energy applied for various purposes in the households including cooking, lighting, water heating, powering appliances, cooling of the space, laundry and sterilization of equipment. The amount of energy used per household varies widely depending on the standard of living of the household, price, age, climate and type of residence (Varghese, Oghale, 2005). Management is the skill of putting all the resources to work for the family (Campbell, 2008). He further asserted that

management involves identifying and using resources, making decisions and solving problems. Management in this works is the ability of the homemakers to utilize resources and household members to meet the needs of households. Therefore, domestic energy management is the effective use and control of domestic energy to achieve definite goals with maximum efficiency. Further, management of domestic energy is the ability of the homemakers to apply the components of management in the utilization of domestic energy such components are planning, organizing, implementing and evaluating to meet the needs of the households (Sethi, 2008). Sunrise every household is a consumer of domestic energy, therefore, homemakers should also be efficient in the usage of the domestic energy. M.Sethi (2008) stated that the management of domestic energy needs some elements of skill acquisition. He distinguished three types of management skills namely:

- technical skills which is mostly concerned with what is to be done;
- human skills, which is concerned with how it is to be done and by who;
- conceptual skills, which is concerned with why it is done.

Therefore to achieve a judicious use of domestic energy these management skills must be put into practice by homemakers who normally do the chores for the households.

Homemakers are the primary providers of household foods, domestic energy and water for cooking, heating and washing (Hawkins, Mothersbaugh, 2010). Also E.U.Anyakoha and M.N.Eluwa (2010) stated that homemakers are women engaged in household services like child rearing, feeding the family, laundry services, purchasing of items and cleaning of the house. As users of resources in the household, homemakers need to acquire the correct measures for improving the use of domestic energy since these domestic energy are scarce and limited in quantity. Therefore, the acquisition of the skills for proper management of domestic energy by homemakers will enable them provide good quality services to the households.

Household is a group of people who live together in one house but are not related by birth or adoption yet they share things in common. It may also be defined as a social unit comprised of those living together in the same dwelling (Merriam- Webster, 2014). There are various types of household units such as family household, a non-family household (Hawkins, Mothersbaugh, 2010). In addition, the defining characteristics of household membership is the occupation of living space for the exclusive use of that household, however, many other ties may unit members of the household including the pooling of incomes, the taking of at least one main meal together, responsibility for the socialization of the young and the welfare of all members (Anyakoha, Eluwa, 2010).

Households may even serve as the locus of production, households are likely to have been the largest and most complex institution, when they fulfill all these functions. Moreover, each household occupies a single housing unit and utilize domestic energy for its activities. In the same vein, households in rural and urban areas depend on domestic energy for their cooking, lighting, powering appliances, preservation of foods, cooling the space among others. Some of these households have been forced to switch over to traditional energy sources due to the high cost, scarcity, inaccessibility and this has caused a lot of problem to the household and neighborhood. However, most of the time, homemakers may not possess the management skills and the domestic will be wasted and it will become hazardous to the household and neighborhood. Most of these homemakers irrespective of their educational background, age, occupation, status and type of family, have a non chilling attitude and careless, with domestic energy use in the household, as a result of this there has been serious health challenges like burns, scald, carbon mono oxide poisoning and even fire outbreak in households and neighborhoods. These are reported in the media every day. Preliminary investigation carried out by the researcher in some areas of the Abia State also revealed these cases of fire outbreak, burns scald and even death. Many of these outbreaks are traced to carelessness of the homemakers. These outbreaks however, have significant health and economic importance and need to be addressed seriously.

The major purpose of the study was to investigate the measures adopted by homemakers in the management of domestic energy within households of Abia State with a view to evolving ways for improving upon such measures. Specifically, the study determined the following.

- measures adopted by homemakers in the use of domestic energy within household;
- strategies for improving the measures adopted by homemakers.

The study sought answers to the following research questions.

1. What are the measures adopted by homemakers in the use of domestic energy within households?
2. What are the strategies for improving the measures adopted by homemakers in the use of domestic energy?

Methodology

This study employed a survey research design (SRD) method. The area of the study is Abia State. Abia State is in the South Eastern part of Nigeria.

Population for the study comprised of all households in the state. A typical household is made up of husband, wife, children and other persons. Each household occupies a single housing unit and utilize domestic energy. Available records indicate that there are 442,693 households in the area of the study (National Population..., 2006).

The sample for the study was 430 households which was used for the questionnaire and the focus group discussion session (FGD). Taro Yamen formula for finite population was used to determine the number of households (Uzoagulu, 2011).

Multistage sampling was used for selecting the number of the households while one Local Government Area was purposely selected from each zone. These gave three LGA's. Each of the three LGA's were represented by a town which is the head-quarter of the zone and a village. At the third stage, systematic random sampling was employed to select every 5^{th} street and every house in the street. According to Abia State Town Planning Authority (2012) there 75 streets in Umuahia, 160 Streets in Aba and 38 Compounds in Eben Ohafia. This gave Umuahia 15 streets, Aba town 32 streets and Ebem 8 compounds, giving a total of 55 streets on the whole.

The instrument for the study was a structured questionnaire and Focus Group Discussion (FGD) guide which was used for the study.

Four (4) point scale response options were used for data collection. The instrument was face validated by three experts. The reliability of the instruments was determined using the Cronbach Alpha reliability index. A reliability coefficient of 0.91 was obtained which suggested that the internal consistency was very high.

Data collection, analysis techniques, distribution and collection of the instrument were done by hand. Out of the 400 copies of the questionnaire distributed to the respondents, 355 were duly completed and returned which represented 89% return rate. FGD was also organized using 30 homemakers. The discussion was brief to prevent the participants from becoming bored or concerned with other communities.

Mean scores and standard deviation were used for answering the research questions. The outcome of FGD was analyzed qualitatively. The key issues raised in the FGD were used in the discussion. Null hypothesis was tested at 0.05 level of significance.

Results and discussion

The following findings were made:

- the homemakers in urban and rural households of Abia State adopted the 14 measures identified in the study;
- all the strategies for improving the measures adopted by homemakers were all accepted by the respondents.

Table 1

Mean scores of the respondents of the homemakers on the measures adopted in the use of domestic energy

S/N	Measures adopted by homemakers	$\bar{X}1$	$\bar{X}2$	$\bar{X}G$	SD	Remarks
1	Remove fuel wood from fire after each cooking	3.43	3.27	3.36	0.81	A
2	Hide it from children to avoid wasting the energy	3.24	2.99	3.12	0.83	A
3	Switch off lights immediately after each use	3.41	3.40	3.40	0.73	A
4	Use good quality fuel wood for good flames	3.30	3.26	3.28	0.71	A
5	Use thermostats to control temperature	3.22	2.90	3.07	0.86	A
6	Put off energy that is not being used	3.03	2.8			A
7	Clean equipment regularly to save energy	2.96	3.02	2.99	0.89	A
8	Unplug electrical appliances after each use to avoid explosion	3.13	3.24	3.19	0.79	A
9	Maintain equipment to ensure it is 00working well	3.06	3.01	3.03	0.86	A
10	Buy good appliances to save energy	3.38	3.29	3.34	0.75	A
11	Reduce flame when food is almost cooked	3.17	3.16	3.17	0.81	A
12	Cook large quantities of foods at a time	3.28	3.30	3.29	0.74	A
13	Teach family members how to use each energy	3.42	3.24	3.34	0.78	A
14	Children are used in building domestic to teach them that it is expensive resource.	3.44	3.26	3.36	0.76	A

Key: $\bar{X}\mathbf{1}$ = urban homemakers, $\bar{X}\mathbf{2}$ = rural dweller homemaker,
XG = grand mean, total respondents =344, SD = standard deviation.

Table 1 shows that the 14 items on the measures adopted in the use of domestic energy were all accepted. This is because the means ranged from 2.94 to 3.40 which were above the cutoff point of 250 and above. The SD of all the items ranged from 0.71 to 0.92 (Table 1). This indicates that the respondents were too far from then mean of each item and were close to one another in their opinion.

Table 2

Strategies for improving the measures adopted by the homemakers in the use of domestic energy

S/N	Strategies	$\bar{X}1$	$\bar{X}2$	$\bar{X}G$	SD	Rank
1	Homemakers should acquire information about energy use before using it.	3.29	3.09	3.19	0.74	A
2	They should listen to the media announcements.	3.15	3.11	3.13	0.82	A
3	Check advertisements on the type of energy required.	3.26	3.19	3.23	0.75	A
4	By making phonecalls to ascertain useage.	2.83	2.77	2.80	0.92	A
5	Sourcing for energy during seasonal glut.	2.88	2.79	2.84	0.88	A
6	Follow the golden rule of swithchingoff wastages.	3.25	3.17	3.19	0.89	A
7	Place fire alarm in homes.	3.31	3.12	3.23	0.77	A
8	Create awareness among household members on the cost involved in obtaining domestic energy .	3.34	3.25	3.31	0.69	A
9	Invest in equipment that switch off energy supply automatically.	3.42	3.33	3.38	0.67	A
10	Turn off appliances rather than leaving it standby.	3.33	3.19	3.27	0.71	A
11	Install warning bells on cooking equipment to save energy,	3.54	3.39	3.47	0.73	A
12	Check PHCN bills monthly to compare cost.	3.51	3.46	3.49	0.72	A
13	Government should subsidize prizes of domestic energy.	3.09	3.08	3.09	0.84	A
14	Government should organize educational workshops directed at dangers of misuse of domestic energy.	3,16	3.08	3.13	0.79	A
15	Homemakers should plan the purchase of domestic energy in advance.	3.15	2.96	3.07	0.86	A
16	Install lights on cooking equipment to save energy.	2.71	2.86	2.78	0.94	A

$\bar{X}1$ urban dweller homemaker, $\bar{X}2$= rural dweller homemakers,
$\bar{X}G$= grand mean, total number of respondents 344, SD= standard deviation, RMK=remark.

Table 2 shows that the respondents agreed with all the strategies identified with their means above cut off point of 2.50 and above. The SD ranges from 0.67 to 0.94 showing the closeness of the opinions of the respondents (Table 2).

The findings of the study on the measures adopted by homemakers in the use of d omestic energy revealed that all the outlined 14 measures adopted were accepted by the respondents to be measures to be adopted in the use of domestic energy within house hold in Abia State. The findings of the study is in agreement with M.Sethi (2008), who stated that effective utilization of resources is simply a matter of good planning , control, evaluation and selfless leadership. He also said that effective measure is the result of constant motivation coupled with creativity in every unit of the household. The finding revealed that, the unplug electrical appliances after each use to avoid explosion and put off energy that is not being used (3.19 and 3.03) are mostly affected measures adopted in domestic energy use. This is in line with R.M.Omar and B.D. Saatkamp (2009) who asserted that despite the availability of cleaner fuels, households continue use a combination of fuels as a risk reduction mechanism against an unreliable supply of cleaner domestic energy. He also reaffirms that the prevention of accidental kerosene poisoning of children and the prevention of devastating housing fires caused by kerosene used for cooking and lighting are important motivations given by women for desiring household electrification automatic switch off of appliances. This is also in line with L.U.Deacon and A.D.Firebaugh (2001), who explained that households achieves its goals through using measures that are suitable to them in the use of its resources. Also, in support of the measures adopted, S.Okeke and N.Nwankwo (2009) in their work, the measures families can adopt to alleviate poverty stated that skill development is important for harnessing a family resources and for promoting economic stability. They further asserted that there is need for emphasis to be placed on the acquisition of some skills that can be applied for purposeful living.

The result of the findings on the strategies for improving the measures adopted by the homemakers in the use of domestic energy revealed that the respondents agreed with all the 16 items identified as shown in table 2.

The respondents supported the idea of checking Power Holding Company of Nigeria (PHCN) bills monthly to compare the cost (3.49=0.72). This is also in line with Campbell (2008) who stated that the amounts of Electricity and Liquefied Natural Gas (LNG), we use each month are measured by the electric meter . He stated further that to find out how much energy used monthly, learn to read the electric meter and gas meter as the case may be. He also opined that by reading an electric meter, you can keep track of the number of kilowatt hours of electricity used. The findings on the item install warning bells on cooking equipment to save energy (3.47=0.73) is also in agreement with F.B.Parnell (2004) who said that small electric household devices that performs a simple task can save time , energy and money for the household. This finding is also in agreement with Sethi (2008) who asserted that maximizing use of domestic energy involves a golden rule of switching on savings and switching off wastages to be followed to the letter. He observed that this saves at least 15-20% of domestic energy cost within households. There was no significant difference in the mean responses of the respondents on the whole items. The result of the Scheffe's Post hoc test revealed that these differences in opinion could be attributed to the differences in location (urban and rural).

Conclusions

The following conclusions were drawn based on the findings of the study. The homemakers in households of Abia State adopted positive measures in the management of domestic energy in order to avoid accidents and wasting of the domestic energy. Creating awareness of these measures are needed for effective management of domestic energy, it will help to improve the practices what they are presently adopting in households of Abia State and this will bring improvement in the welfare of the individual households. Other Institutions in the local State and Federal will find the study useful because they will use it to educate their staff on the principles needed for domestic energy management. This will also reduce the possibilities of fire outbreaks in the neighborhood.

Recommendations

From the findings of the study it is hereby recommended that:

1. Government should support the households with the purpose making the cleaner domestic energy easily accessible and affordable to both rural and urban homemakers, because the emergence of a stable household is not possible without domestic energy.
2. Seminars, conferences and workshops should be organized to educate homemakers on how to improve their skills of domestic energy use.
3. Power Holding Company of Nigeria (PHCN) should also make sure there is steady supply of electricity to save the homemakers time, food and money.
4. Energy saving devices should be encouraged in households to reduce work, fatigue especially in food preparation.

Bibliography

1. *Abia State Town Planning Authority* (2012). Umuahia Town Planning Office, Statistics Department, Umuahioa, Abia State, Nigeria.
2. Anyakoha E.U., Eluwa M.N. (2010). *Home Management for Schools and Colleges.* Africana First Publishers Ltd, Onitsha, Nigeria.
3. Campbell S.R. (2008). *The Confident Consumer*. The Goodheart – Wilcox Company In. USA.
4. Deacon L.U., Firebaugh A.D. (2001). *Family Resources Management Report*. National Center for Family Statistics.
5. Hawkins D.I., Mothersbough D.L. (2010*). Consumers Behavior and Building Marketing Strategy* (11th ed.). McGraw – Hill/Irvin Companies Inc, New York, USA.
6. Kuper A.X., Kuper J. (2004). *The Social Sciences and English Media* (3rd edition). Published by Rutledge Taylor and Frances group India, New York, USA.
7. Merriam- Webster. An Encyclopedia Britannica Company [onlain] [07.10.2014]. Available at http://www.merriam-webster.com
8. *National Population Census* (NPC, 2006). Diary of Population of states by Local Government Areas, Federal Republic of Nigeria.
9. Okeke S.U.N., Nwankwo N.N. (2009). The Measures Households in Nigeria can adapt to Alleviate Poverty: Implications for Home Economics Education, *Journal of Home Economics Research Association Nigeria,* Vol. 10, pp.75 – 85.
10. Omar R.M., Saatkamp B.D., Kamman D.M. (2009). *From Linear Fuel Switching to Multiple Cooking Strategies.* A critique and alternative to the Energy Ladder. Model World Bank Development, 28 (12), 2083 – 2013. *Elsevier Sciences* Ltd, Britian. [onlain] [07.10.2014]. Available at www.elsevier.com/locate/worlddev
11. Parnell F.B. (2004*). Skills for living*. The Goodheart Wilcox Co. Inc., USA.
12. Sethi M. (2008). *Institutional Food Management*. New Age International Limited Publishers, New Delhi, India.
13. Uzoagulu (2011). Practical Guide to Writing Project Reports in Tertiary Institution Enugu. John Jacobs Classic Publishers Ltd, Nigeria.
14. Varghese B., Oghale C., Scinivasan P. (2005). *Home management for Colleges*. New Age International (p) limited publishers, New Delhi, India.

The Third-Year Student's Creativity Changes in Applying Virtual Learning Environment on Technology Pedagogical Studies Process in Lithuania

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Abstract: The paper analyzes the expression of creativity of trainee teachers of Technologies in Lithuania. In the autumn semester of 2013-2014 there was an educational project conducted at the Lithuanian University of Educational Sciences. Lectures, seminars and self-dependent studies included the application of the virtual learning environment (VLE) and other virtual sources of information. The educational project involved the third year female students of Technology Education (they constituted the experimental group). The control group was composed of the third year female students of Mathematics Education. At the beginning and end of the semester both the groups were given questionnaires for diagnosing personal creativity. The target questions were prepared on the basis of E.P. Torrance's recommendations and the Lithuanian Primary and Basic Education Framework Programme (Technologies) for grades 5 to 12. The paper analyzes the variation of the informants' creative expression in relation to the presence or absence of VLE in the study process. The analysis of the qualitative research compares the expression of the informants' creativity on the basis of four criteria of creativity assessment: fluency, flexibility, originality and elaboration.

Keywords: creativity, trainee teachers of Technologies, virtual learning environment, higher education.

Introduction

The new millennium has endowed the humanity with a unique phenomenon – the unpredictably rapid progress of information technologies. Changes of different items of equipment and software have become our routine and have transformed our mode of life, habits, learning, work, likes, interrelations and forms of communication beyond recognition. In the transformation process of the society from the informational to the creative one, the educational institutions face a new challenge – the purposeful and efficient application of information communication technologies (ICT) in the process of education answering the needs of the society and the expectations of professional bodies of business (Informatikos, informacinių..., 2012). More than three decades ago S. Papert (1993) forecast that the use of computers in the process of education would expand the possibilities for students' creative expression, create new ways of integral education, enhance the availability and accessibility of information and facilitate the cooperation of teachers and learners. The present-day situation shows that the researcher's predictions were correct, nevertheless, R. Halverson and A.Smith (2009) highlight the discrepancy between the use of ICT in leisure time and at school, emphasizing the significance of the complexity of the educational process.

The use of ICT and their efficiency primarily depend on the educational institution and the educator. Successful application of ICT in the process of education reveals the teacher's competence and creativity (Leach, Moon, 2000; Davies, Howe, 2004; Fisher, Higgins, 2006; Halverson, Smith, 2009; Wang, Chen, 2010). The learner's activity can be viewed as creative if its results comply with the criteria of novelty and relevance (Davies, Howe, 2004; Whitelaw, 2007; Kaufman, Kaufman, 2009). The same requirements apply to the educator. Creative pedagogy requires the following components: pedagogical knowledge, subject competence and school awareness which are managed by the individual (Leach, Moon, 2000). Scientific innovations can be properly applied and assessed in the process of education only by an inquisitive, creative teacher (Davies, Howe, 2004; Whitelaw, 2007; Kaufman, Kaufman, 2009; Miller, Imrie, 2014).

Since the emergence of ICT, it has been expected that technologies will alter people's thinking and the process of education. The aforementioned ideas were transferred from researchers' papers to the documents regulating education when computers became personal possessions that transformed the academic world (Papert, 1993; Gardner, 1985; Papert, Harel, 1991; Leach, Moon, 2000; Clark, 2008;

Miller, Imrie, 2014). The center of the process of education is the learner, his needs and individual abilities. Teacher training has become a new challenge. It is the teacher who applies scientific innovations in practice, raises and implements goals, creates and applies new methods, and fits the whole world in the classroom. Therefore, it is important to focus on teacher training, the application of innovations in the process of teacher training and the learning of trainee teachers. Aiming at the changes at school, first of all it is urgent to alter teacher training. The modern teacher is to create the constantly learning school where every single member of the learning community seeks personal and professional competence whose results meet the needs of the society (Whitelaw, 2007; Clark, 2008; Kaufman, Kaufman, 2009; Sula, Spaho, 2014). One of the teaching methods applied by the modern teacher is the application of virtual learning environments (VLE) in the study process. The inclusion of VLE in the regular study process facilitates everybody's individual improvement while implementing their goals (Joint, 2003; Joint, 2005).

Since the practical realization of all the teaching subjects takes place in the classes of home economics, the training of Technology teachers should receive exceptional attention, developing the trainee teachers' creativity and the purposeful application of ICT in the process of education. Answering this necessity, the **research problem** of this paper could be formulated in the following way – How is the creative expression of Lithuanian trainee teachers of Technologies changing by applying VLE in the study process? **The object** of the paper is the creative expression of third year students of educational study programmes. **The goal** is to reveal the changes of creative expression of the third year students of Technology Education at Lithuanian University of Educational Sciences resulting from the introduction of VLE in the study process.

The **research questions** are:

1. What was the creative expression of the third year students of Technology Education at the beginning of the educational project?
2. What was the creative expression of the third year students of Mathematics Education at the beginning of the educational project?
3. How did the creative expression of the informants change at the end of the educational project?

The research methods. Scientific literature and document review, educational project, qualitative research based on E.P. Torrance's recommendations.

Methodology

In the autumn semester of the 2013-2014 school year there was an educational project conducted at Lithuanian University of Educational Sciences. Lectures and seminars involved the use of various virtual learning environments and other virtual sources of information. Within the limits of the project in the virtual environment of distance learning *Moodle* there was a series of lectures, seminars and self-dependent studies prepared which included target links to virtual learning environments and other virtual sources of information. There was a total number of 197 links uploaded. During self-dependent studies special attention was given to VLE *emokykla.lt*; moreover, students were asked to use as diverse target virtual material as possible, without limiting themselves to the recommended links.

The educational project involved the third year students of Technology Education (they constituted the experimental group). The control group was composed of the third year students of Mathematics Education. At the beginning and end of the semester both the groups were given questionnaires for diagnosing personal creativity. The target questions were prepared on the basis of E.P. Torrance's (1988) recommendations and the Lithuanian General Education Programmes for Technologies (Pradinio ir pagrindinio…, 2008) for grades 5 to 12. The questionnaire was composed of two parts: the verbal and the non-verbal one (Figure 1).

Both the verbal and the non-verbal parts of the questionnaire include four tasks. In the verbal part of every task the respondent could choose one of four supplied variants whose content was related to the topics of textile, nutrition, constructive materials and electronics. Hence, the verbal part consisted of the total of sixteen tasks and only four were supposed to be completed. For the tasks focusing on the non-verbal part of creativity every respondent was given a box of twelve colored pencils and a pencil

sharpener. The respondents were free to choose the colors and their application. The verbal and non-verbal tasks were to be completed within a limited period of time depending on the type and complexity of the task (Figure 1).

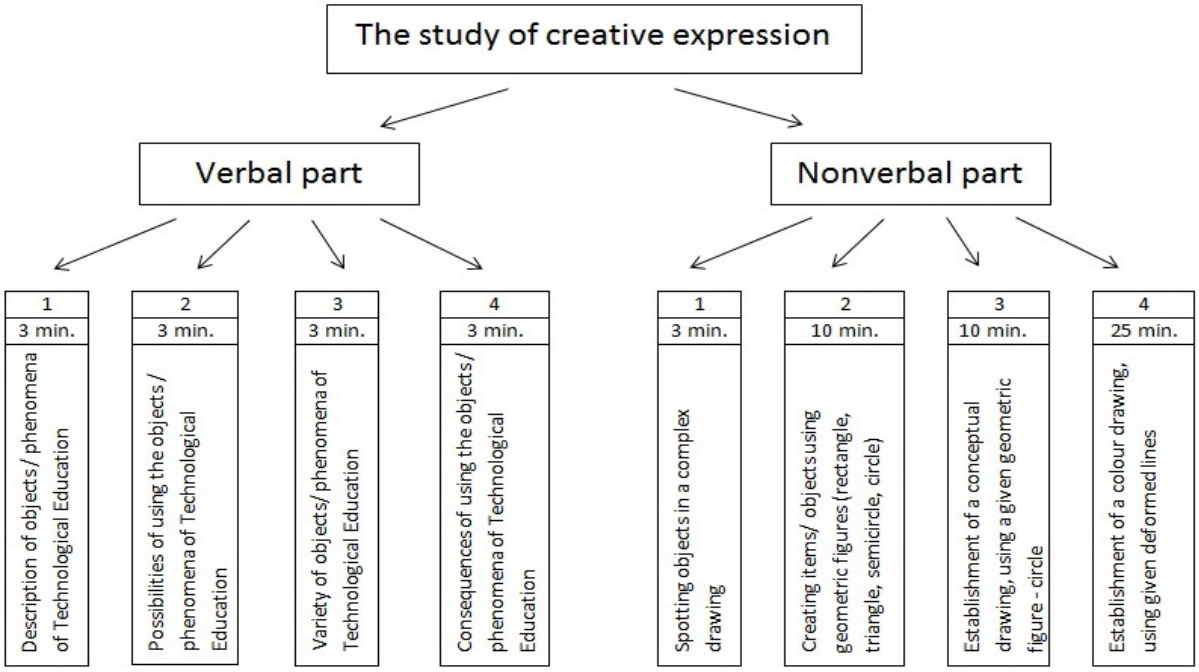

Figure 1. The composition of the questionnaire for analyzing creative expression based on E.P. Torrance's (1988) recommendations and the Lithuanian Primary and Basic Education Framework Programme (Technologies) (Pradinio ir pagrindinio…, 2008) for grades 5-12.

The analysis of the qualitative research data, obtained at the beginning of the semester (the start of the educational project) and at the end of the semester (the end of the educational project), enables a comparison of the informants' creative expression in relation to four criteria of creativity assessment: fluency, flexibility, originality and elaboration. The variation of the informants' creative expression (KP) is calculated by means of the following formula:

$$KP = \frac{\sum KR_2}{\sum KR_1}$$

KR_1 – the creative expression of the informants at the start of the project, KR_2 – the creative expression of the informants at the end of the project.

When the variation of creativity is less than 1, it is considered to be *negative*. And conversely, if the result is more than 1, the variation of creativity is considered to be *positive*. The lower the figure is in relation to 1 the more negative is the variation of creativity. The higher the figure is in relation to 1 the more positive is the variation of the creative expression of the informants.

The characteristics of the informants. The sample of a qualitative research is purposive and typically convenient (Patton, 2002). The educational project involved all the third year female students of Technology Education at Lithuanian University of Educational Sciences (the experimental group). The control group was composed of the third year female students of Mathematics Education. The educational and demographic characteristics of the informants were diverse: the girls' age was from 20 to 22, the average grade was from 6.7 to 10, etc. (Table 1).

Table 1

Educational and Demographic Characteristics of the Qualitative Research Participants

No	Nationality	Average grade of the last (4th) term	Age	No	Nationality	Average grade of the last (4th) term	Age
3rd year students of Technology Education study programme				3rd year students of Mathematics Education study programme			
1	Lithuanian	9.5	21	1	Russian	9.07	22
2	Lithuanian	10.0	21	2	Polish	8.0	21
3	Lithuanian	9.03	21	3	Lithuanian	7.5	22
4	Lithuanian	10.0	21	4	Polish	9.0	22
5	Lithuanian	9.4	20	5	Lithuanian	9.0	22
6	Lithuanian	9.0	21	6	Polish	6.7	22
7	Lithuanian	9.7	22				

Results and discussion

The creative expression of the third year students of Technology Education (the experimental group) at the beginning of the educational project

The analysis of the qualitative research data revealed that the informants possessing the highest average grade (for the 4th semester) also got the highest points for creative fluency and creative originality in the group (informants No. 2,4, and 7) (Table 2). Hence, academic achievements create favorable conditions for students to present a lot of similar ideas in the target situation, and some of the ideas stand out from the rest in the group by their originality and/or uniqueness. It can be assumed that knowledge and individual experience, acquired during educational studies at the university, give a positive impulse to express ideas and present suggestions or the possible solutions in diverse situations. It has to be noted, though, that the relation between the academic achievements and creative flexibility was not determined.

Table 2

The results of creative expression of the third year trainee teachers of Technologies at the beginning of the educational project

Informant	FLUENCY		FLEXIBILITY		ORIGINALITY		ELABORATION		CREATIVITY		Average grade
	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal	
1	80		*131*		*211*		27		*449*		9.5
	45	35	50	81	140	71	-	27	235	214	
2	**95.2**		142		**303**		27		567.2		**10**
	56	39.2	65	77	215	88	-	27	336	231.2	
3	*74.1*		143		244		26		487.1		*9.0*
	33	41.1	53	90	145	99	-	26	231	256.1	
4	**95.5**		**149**		257		**38**		539.5		**10**
	56	39.5	52	97	185	72	-	38	293	246.5	
5	84		143		223		*23*		473		9.4
	50	34	66	77	140	83	-	23	256	217	
6	81.9		134		219		28		462.9		*9.0*
	51	*30.9*	68	66	150	69	-	28	269	193.9	
7	**109.8**		**187**		**375**		**39**		**722.8**		**9.7**
	57	52.8	75	112	235	140	-	39	379	343.8	
Average	88.6		147		261.71		29.71		528.79		9.51
	49.71	38.93	61.29	89.71	172.86	88.86	-	29.71	285.57	243.21	

It was determined that the verbal creative expression of Lithuanian trainee teachers of Technologies (3rd year students) is more developed than the non-verbal one (the verbal creative expression is 1.17 times higher than the non-verbal one), yet the results of non-verbal creative flexibility are higher than the results of the verbal creative flexibility (Table 2). It means that the plentiful and original ideas of

Lithuanian trainee teachers of Technologies are easier expressed in the verbal form; nevertheless, the variety of groups of ideas is easier expressed in the non-verbal form. Such results can be related to the specificity of Technology Education study programme: in their studies students creatively merge the traditional and innovative technologies and techniques and use them in the diverse hand-made articles, applying the educational method of projects. In the primary stages of designing students look for information, analyze analogues, classify the information, and then generate their own ideas orally, in writing and in their sketches. Then students plan the implementation of their ideas by selecting the suitable materials, techniques, etc. These processes frequently adjust the initial ideas of the creator (Statauskienė, 2003; Statauskienė, 2005). In other words, the search for ideas is more related to the verbal form while their implementation (the variety of solutions, rather than their abundance) is connected with the non-verbal form. Hence, it can be stated that the results of creative expression are higher in the field (verbal or non-verbal) where the informant possesses better skills and experience, yet this is not always related to knowledge.

The creative expression of the third year students of Mathematics Education (the control group) at the beginning of the educational project

The analysis of the qualitative research data revealed that the third year students of Mathematics Education at Lithuanian University of Educational Sciences possess a better developed non-verbal creative expression since its results are 1.04 times higher than those of verbal creative expression. The highest results of general creative expression, creative flexibility and creative originality were determined in the works of the informants possessing the highest average grades in the group (Table 3). It was determined that the same informant's results of verbal and non-verbal creative expression are different and are not related to the person's average grade. The analysis of the research data revealed that the informant with the lowest average grade in the group (6.7) had the highest verbal creativity in the group (357) and the result of his general creativity is the third in the group (Table 3).

Table 3

The results of creative expression of the 3rd year trainee teachers of Mathematics at the beginning of the educational project

Informant	FLUENCY		FLEXIBILITY		ORIGINALITY		ELABORATION		CREATIVITY		Average grade
	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal l	Verbal	Non-verbal	
1	78.8		143		289		24		534.8		**9.07**
	41	37.8	63	80	160	129	-	24	264	270.8	
2	79.1		155		282		23		539.1		8.0
	44	35.1	69	86	170	112	-	23	283	256.1	
3	*61.8*		*124*		*184*		*13*		*382.8*		7.5
	32	*29.8*	*45*	79	*105*	*79*	-	*13*	*182*	*200.8*	
4	95.2		**194**		374		27		690.2		**9.0**
	46	49.2	66	**128**	200	174	-	27	312	378.2	
5	**107.2**		174		**406**		22		**709.2**		**9.0**
	52	**55.2**	60	114	210	**196**	-	22	322	**387.2**	
6	101.7		169		354		**28**		652.7		*6.7*
	50	51.7	**97**	**72**	**235**	119	-	**28**	**357**	295.7	
Average	87.3		159.83		314.83		22.83		584.8		8.21
	44.17	43.13	66.66	93.16	180	134.83	-	22.83	286.67	298.1	

On the basis of the results of the qualitative study it can be stated that in the study programme of Mathematics Education academic achievements create favorable conditions for students to present different ideas in the target situation, and some of the ideas stand out from the rest in the group by their originality and/or uniqueness. Nevertheless, it is important to emphasize that the average grade does not determine the student's creative expression, thus the study results cannot be viewed as a direct factor for the assessment of personal creative expression.

The creative expression of the experimental group at the end of the educational project

The results of the educational project show that the use of VLE in the study process prompted the sustainable growth of both the verbal and non-verbal creative expression of the experimental group (the variation is 1.25 and 1.22 respectively). The analysis of the qualitative research data revealed both positive and random negative variation of the informants' creative expression, though positive variation was more frequent by 3.6 times (positive variation – 22 cases out of 28, negative variation – 6 cases out of 28).

Most frequently the positive variation of creative expression was determined in the expression of the informants' creative flexibility (7 cases out of 7), and least frequently it was determined in the expression of creative elaboration (4 cases out of 7). The biggest and smallest positive variation of creative expression was determined in the expression of the informants' creative originality (1.69 and 1.01). The biggest negative variation of creative expression was determined in the expression of creative elaboration (0.81), and the smallest one – in the expression of creative fluency (0.99).

The use of VLE in the study process prompted more negative variation in the expression of verbal creativity (3 cases out of 7) than in the non-verbal one (1 case out of 7) (Table 4). VLE often employs visual material which has a direct influence on the non-verbal creative expression of trainee teachers of Technologies. It was determined that the variation of the informants' creative expression which appeared due to the application of VLE in the study process was not related to the general academic achievements.

Table 4

The results of creative expression of the 3rd year students of Technologies at the end of the educational project

Informant	FLUENCY		FLEXIBILITY		ORIGINALITY		ELABORATION		CREATIVITY		Average grade
	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal l	Verbal	Non-verbal	
1	*0.99*		1.32		1.06		*0.81*		1.11		9.5
	0.69	1.37	1.2	1.40	1	1.17	-	*0.81*	*0.98*	1.24	
2	1.04		1.12		1.01		**1.30**		1.06		**10**
	0.89	1.25	*0.92*	1.29	*0.95*	1.16	-	**1.30**	*0.94*	1.23	
3	**1.46**		**1.36**		1.63		1.12		**1.50**		9.0
	1.70	1.27	1.53	1.27	1.62	1.65	-	1.12	1.61	**1.40**	
4	1.29		1.30		1.61		*0.90*		1.40		**10**
	1.25	*0.13*	**1.79**	**1.03**	1.43	2.08	-	*0.90*	1.43	1.37	
5	1.38		1.29		**1.69**		1.04		1.48		9.0
	1.3	**1.49**	1.32	1.26	**2**	**1.14**	-	1.04	**1.69**	1.23	
6	*0.87*		1.07		*0.89*		1.18		*0.95*		**10**
	0.65	1.23	*0.84*	1.30	*0.83*	1	-	1.18	*0.80*	1.17	
7	1.15		1.12		1.22		*0.97*		1.15		9.0
	1.21	1.08	1.44	0.91	1.34	1.02	-	*0.97*	1.30	*0.99*	
Average	1.17		1.23		**1.3**		1.05		1.24		9.51
	1.10	1.12	1.29	1.21	1.31	1.32	-	1.05	1.25	1.23	

The results of the educational project make it possible to state that the use of VLE in the study process promotes more insights into problem solutions by Lithuanian trainee teachers of Technologies. In the problematic situations there appear more possible solutions, yet the attention to separate details, which are inseparable from the whole, significantly decreases. The focus on details can even change global decisions. And conversely, without focusing on details, there is a possibility of making the wrong decisions, being more or less harmed, experiencing losses, damaging others, etc. The application of VLE in the study process of trainee teachers of Technologies can be compared to the hunter's behavior. While chasing the prey, the hunter strategically selects the paths or the shrubberies and does not focus on the kinds of moss, berries, mushrooms or trees and the forms of leaves. The hunter does not concentrate on the insignificant details which are irrelevant for the ultimate goal, but rather he focuses on the massive target – the objective of his activity. The use of VLE in the study process makes it possible to develop flexible hunters of information application.

The research results enable the educators purposefully select the study methods on the basis of the overall study goals. VLE is not an appropriate method to develop the willpower and perceptiveness of the trainee teachers of Technologies. Nevertheless, VLE is evidently suitable for the development of the students' outlook and information search skills which in their own turn enhance the flexibility of creative thinking.

The creative expression of the control group at the end of the educational project

The analysis of the data acquired with the third year students of Mathematics Education participating in the educational project revealed uneven variation of the informants' creative expression: the expression of verbal creativity grew (the average result was 1.34), while the expression of non-verbal creativity decreased (the average result was 0.97) (Table 5). Nonetheless, there were 2.4 times more cases of positive variation of creative expression (17 cases out of 24) than those of negative variation (7 cases out of 24). It has to be noted that at the beginning of the educational project the control group demonstrated higher results of non-verbal creative expression, but at the end of the project, conversely, they had higher results of verbal creative expression. The positive variation of creative expression was most pronounced in the case of the informant who had demonstrated the lowest results of creative expression at the beginning of the educational project (informant No. 3). The negative variation of creative expression was most discriminate in the case of informant No. 5 who had distinguished himself by the highest results of creative expression in the control group (Table 5).

Table 5

The results of creative expression of the third year students of Mathematics Education at the end of the educational project

Informant	FLUENCY		FLEXIBILITY		ORIGINALITY		ELABORATION		CREATIVITY		Average grade
	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal	Verbal	Non-verbal l	Verbal	Non-verbal	
1	1.32		1.23		*0.87*		1.38		1.05		**9.07**
	1.46	1.17	1.37	1.09	1.09	*0.60*	-	1.38	1.22	*0.89*	
2	1.27		1.01		1.08		*0.65*		1.07		8.0
	1.25	1.30	1.22	*0.83*	1.12	1.03	-	*0.65*	1.16	*0.97*	
3	**1.69**		**1.39**		**1.55**		**1.92**		**1.53**		7.5
	1.81	1.55	**2.29**	*0.87*	**1.62**	**1.46**	-	**1.92**	**1.82**	**1.27**	
4	1.29		1.19		1.23		1.04		1.22		**9.0**
	1.57	1.03	2	*0.78*	1.5	*0.91*	-	1.04	1.62	*0.89*	
5	*0.97*		1.10		*0.87*		*0.91*		*0.94*		**9.0**
	0.94	*0.99*	1.85	0.71	*0.95*	*0.78*	-	*0.91*	1.12	*0.80*	
6	1.14		1.07		*0.99*		*0.89*		1.03		6.7
	1.08	1.19	1.46	0.78	*0.96*	1.04	-	*0.89*	1.08	*0.97*	
Average	1.28		1.16		1.10		1.13		1.14		8.21
	1.35	1.21	1.70	0.85	1.21	0.97	-	1.13	1.34	*0.97*	

On the basis of the results of the qualitative research it can be stated that the process of educational studies without the use of VLE is mostly oriented at the development of the learners' verbal creativity and thus it negatively affects their non-verbal creativity. At the beginning of the educational project the non-verbal creativity of the control group was 1.04 times higher than the verbal one, while at the end of the project their verbal creativity was 1.33 times higher than the non-verbal one. Hence, the use of VLE in the process of educational studies enables the sustainable growth of the learners' creativity. At the beginning of the educational project the verbal creativity of the experimental group was 1.17 times higher, and at the end of the project it was 1.19 higher than non-verbal creativity. It has to be noted that the use of VLE in the process of educational studies creates favorable conditions for learners to improve and develop creativity in accordance with their individual needs, inclinations, possibilities and qualities while preserving their uniqueness and identity.

The benefits of using VLE in the study process for the learners' creativity are also supported by the fact that at the beginning of the educational project the general creativity results of the third year students of Mathematics Education were 1.11 times higher than those of the third year students of

Technology Education (respectively 584.8 and 528.79), while at the end of the educational project the general creativity results of the informants in both the experimental and control groups became practically equal (respectively 650.59 and 650.7). Hence, the influence of VLE on the intensification of the learners' creative expression growth is self-evident.

Conclusions

The informants who possessed the highest average grades for their academic achievements (in the experimental and control groups) also demonstrated the highest results of general creativity and creative originality expression in the group. Nevertheless, the average grades do not determine the students' creative expression, thus their academic achievements cannot be viewed as the indicative factor for the assessment of people's creative expression. The abundance and originality of the trainee Technology teachers' ideas can be easier expressed in the verbal form, but the variety of groups of ideas is easier revealed in the non-verbal form. However, the third year students of Mathematics Education demonstrated a better developed non-verbal creative expression. The aforementioned differences can be related to the different specificity of the study programmes (Technology Education and Mathematics Education).

The analysis of the qualitative research data revealed that more positive variations of creative expression were determined in the experimental group; however, the interrelation between the variations of the informants' creative expression and their general academic achievements was not established. The use of VLE in the process of educational studies intensifies the sustainable growth of personal verbal and non-verbal creativity and creates favorable conditions for individual improvement as well as for the development of creativity in accordance with one's needs, inclinations, possibilities and characteristics while preserving the learners' uniqueness and identity, and escaping drastic variations of creative expression. The application of VLE in the study process of trainee teachers of Technologies can be compared to the hunter's behavior: the hunter strategically selects diverse unique ideas, but his focus on separate details significantly decreases, even though they do constitute the whole. If the process of educational studies does not involve the use of VLE, it is more oriented at the development of the learners' verbal creativity and at the same time it negatively affects their non-verbal creativity. The research also revealed that the results of the informants' creative expression in the control group were equalized in the study process, the initial discrepancy between the informants demonstrating the highest and lowest results of creative expression disappeared and the group became more homogenous.

Acknowledgement. Postdoctoral fellowship is being funded by European Union Structural Funds project "Postdoctoral Fellowship Implementation in Lithuania".

Bibliography

1. Clark T. (2008). Online learning: Pure potential. Education Leadership, Reshaping High School, Vol. 65(8). [online] [10.01.2015]. Available at http://www.ascd.org/publications/educational-leadership/may08/vol65/num08/Online-Learning@-Pure-Potential.aspx
2. Davies D., Howe A., Fasciato M., Rogers M. (2004). How do trainee primary teachers understand creativity? Education-line. [online] [21.12.2014]. Available at http://www.leeds.ac.uk/educol/documents/00003727.htm
3. Fisher T., Higgins C., Loveless A. (2006). Teachers Learning with Digital Technologies: A review of research and projects. Futurelab. [online] [20.12.2014]. Available at http://archive.futurelab.org.uk/resources/documents/lit_reviews/Teachers_Review.pdf
4. Gardner H. (1985). The mind's new science: A history of the cognitive revolution. Basic Books, Inc., New York, p. 448.
5. Halverson R., Smith A. (2009). How New Technologies Have (and Have Not) Changed Teaching and Learning in Schools, Journal of Computing in Teacher Education, Vol. 26 (2), pp. 49-54.
6. Informatikos, informacinių technologijų ugdymo kaitos 2014–2020 metų gairės (2012). (The 2014–2020 Guidelines for Transforming Informatics and Information Technology Education).

[online] [21.12.2014]. Available at http://www.upc.smm.lt/ugdymas/dokumentai/svarstomi/it/Informatikos_ir_IT_ugdymo_nuo_2015_m._gaires_2012-10-04.pdf (In Lithuanian)
7. Joint N. (2003). Information literacy evaluation: moving towards virtual learning environments, The Electronic Library, Vol. 21(4), pp.322-334.
8. Joint N. (2005). Traditional bibliographic instruction and today's information users, Library Review, Vol. 54(7), pp. 397-402.
9. Kaufman J. C., Kaufman S. B., Beghetto R. A., Burgess S. A., Persson R. S. (2009). Creative giftedness: beginnings, developments, and future promises. ed. Larisa V. Shavinina, International Handbook on Giftedness. Springer Science & Business Media, p. 585-598.
10. Leach J., Moon B. (2000). Pedagogy, information and communications technology and teachers' professional knowledge, Curriculum Journal, Vol. 11(3), pp.385- 404.
11. Miller A. H., Imrie B. W., Cox K. (2014). Student Assessment in Higher Education– A Handbook for Assessing Performance. Routledge, London, New York, p. 288.
12. Papert S. (1993). Mindstorms: Children, computers and powerful ideas. Basic Books, New York, p. 252.
13. Papert S., Harel I. (1991). Constructionism. Ablex Publishing, New York, p. 518.
14. Patton M. Q. (2002). Qualitative research & evaluation methods. Thousand Oaks (Calif.), Sage Publications, p. 598.
15. Pradinio ir pagrindinio ugdymo bendrosios programos (Technologijos) (2008). LR Švietimo ir mokslo ministerija, Vilnius (Primary and Basic Education Framework Programme (Technologies). LR Ministry of Education, Vilnius). [online] [19.12.2014]. Available at http://portalas.emokykla.lt/bup/Puslapiai/pradinio_ir_pagrindinio_ugdymo_bendrosios_programos_isakymas_2.aspx; http://portalas.emokykla.lt/bup/Documents/Pradinis%20ir%20pagrindinis%20ugdymas/Technologijos.pdf (In Lithuanian).
16. Statauskienė L. (2003). Technologinio ugdymo paradigmos erdvė pasaulyje ir Lietuvoje, Pedagogika (Space of Technology Education Paradigm in the World and in Lithuania, Pedagogy), Vol. 66, pp. 15–23. (In Lithuanian)
17. Statauskienė L. (2005). Technologinio ugdymo didaktinių komponentų ir ugdymo proceso dalyvių santykio harmonizavimas. Daktaro disertacija (The harmonization of the connection between didactic components of technology education and participants of educational process. Doctoral Thesis), Vytauto Didžiojo universiteto leidykla, Kaunas, p. 182. (In Lithuanian)
18. Sula A., Spaho E., Barolli L., Miho R. (2014). A Proposed Framework For Combining Smart Environment And Heuristic Diagnostic Teaching Principles In Order To Assess Students' Abilities In Math And Supporting Them During Learning, Mediterranean Journal of Social Sciences, Vol. 5(2), pp. 187-196.
19. Torrance E. P. (1988). The nature of creativity as manifest in its testing. Ed. Sternberg R. J., The nature of creativity, Cambridge University Press, New York, p. 43-75.
20. Wang Y., Chen N., Levy M. (2010). Teacher training in a synchronous cyber face-to-face classroom: characterizing and supporting the online teachers' learning process, Computer Assisted Language Learning, Vol. 23(4), pp.277-293.
21. Whitelaw L. A. (2007). An Evaluative Study of Teacher Creativity, use of the Heuristic Diagnostic Teaching Process and Student Mathematics Performance. [online] [06.01.2015]. Available at https://idea.library.drexel.edu/islandora/object/idea%3A1870/datastream/OBJ/view

Home Economics and Technologies at an Elementary School: Problems and Solutions

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Abstract: The choice of the research theme and its topicality was detected by still existing inconsistency between the theory and practice in the learning process of Home Economics and Technologies. Research objective is to explore and analyze the problematic aspects of unity of theory and practice in the study subject of Home Economics and Technologies in the aspect of pupils' development at an elementary school in historical and contemporary perspective and to look for solutions. The research has used the theoretical methods – literature, document analysis and empirical methods – interviews, observation and practical experience analysis as well as mathematical processing of data. The study was carried out in Teacher Training and Educational Management Academy and in urban and rural elementary schools of Latvia. It is typical to have mental, physical, intellectual unity and harmonization of emotions in the learning process of study subject Home Economics and Technologies. That would facilitate elementary school pupils' development, formations of labour skills and acquisition of its values. The variation of the content of Home Economics and Technologies, pragmatism, creative activity, guarantee of free will and the opportunity to meet individuals' needs are the preconditions for pupil's development. It was clarified that the tasks of Home Economics and Technologies in the aspect of pupils' development are still not realized in practice. The recommended solution is the reformation of students' (prospective teachers) practice in schools. It would be desirable to include the student conference with exchange of experience and the exhibition of methodological materials prepared by students during the practice.

Keywords: the study of Home Economics and Technologies, elementary school, pupils' development.

Introduction

Pupils regarding their national, cultural and life organization values, prepare themselves for life. Over time, the perception of the significance of the study subject „Home Economics and Technologies" has changed. The question of importance of handicrafts in children's development has been highlighted.The latest study shows that there is an increase of the number of pupils and students (prospective teachers) who have not mastered the basic simplest handicraft skills in working with textiles, as well as basic skills necessary for life activities (Volāne, 2008a, Volāne, 2008b). A question about the relation of theory and practice is still topical.

Nowadays there are many publications, descriptions of scientific studies available, however, in the last 20 years; existing contradictions between theory and practice in the aspect of pupils' development have still not been resolved in the study of Home Economics and Technologies.

Firstly, the contradiction between the implementation opportunities of the teaching content at a modern elementary school and pupils' individual abilities and needs.

Secondly, the conflict between the methods used in the training process, a uniformity of work and diversity importance emphasized in theory.

Thirdly, there is the contradiction between the awareness of learning tasks of Home Economics and Technologies (educational, developing, instructional) and their implementation into practice.

Aim of the Study

To explore and analyze the problematic aspects of unity of theory and practice in the learning of Home Economics and Technologies in the pupils' development aspect at an elementary school in historical and contemporary perspective and to look for solutions.

Methodology

The study of the subject "Home Economics and Technologies" has changed as a result of various school reformations. The name of the subject has been changed – handicrafts, crafts, housekeeping, household study, housekeeping and handicrafts and finally home economics and technologies. With *the technology* the author understands the acquisition of different skills of handicraft technologies in the learning process. With *the study content of Home Economics and Technologies* the author understands the scope of knowledge, methods and attitudes, by acquiring which the pupils develop their intellectual, emotional will power, and improve labour skills and habits. Consequently, in this study the author are going to use the name of this subject in accordance with historical documents.

The theoretical methods – literature, document analysis and empirical methods – interviews, observation and practical experience analysis as well as mathematical processing of data were used during the research.

The study was carried out in Teacher Training and Educational Management Academy and in urban and rural elementary schools of Latvia.

Results and discussion

K.Cīrulis had a special role in the creation of the handicraft training study system in Russia and Latvia, who created a handicraft training system, with an emphasis on handicrafts, its tasks and the contents of the main learning principles that are still topical today.

K.Cīrulis's practical activity is also important, the aim of which is the implementation of his own handicraft teaching system in schools, as a result, there were the first bigger teacher preparation courses held in Riga in 1888, 1889, 1890, which were led by K.Cīrulis himself. The major audience as noted by E.Pētersons, were Latvian and Estonian teachers (Pētersons, 1931, 89).

K.Cīrulis emphasizes the idea that children have to be prepared for life by creating their aesthetic tastes, stimulating the imagination. Possibly, therefore he recommends that the handicraft training content should not be limited by knitting, sewing, embroidery and patching, but it should also include other types of work such as washing, ironing and lessons in the kitchen, in the garden and the vegetable garden (Цируль, 1894, 166).

In the development of the model of a handicrafts teacher, K.Cīrulis's cognitions are important – that the handicrafts teachers have to feel the urge to work, feel the duty to nurture love to work, to be reflective and remember that handicrafts are a means to reach the goal (for a personal development) (Цируль, 1894, 189).

The author's opinion is that the handicraft teaching, its aims and principles at the end of the 19th century are understood and implemented in different ways. The situation is not clearly visible because the execution of handicraft training plan and syllabus depends on the local conditions and the teacher ho implements them. And yet the handicraft training tasks are associated mainly with practical action, practical product fabrication and preparation of pupils for life and the acquisition of maintaining order.

There is an essential question - why the handcrafts training system developed by K.Cīrulis was not implemented into practice. It is worth considering E.Pēterson's cognition that the first stage of the labour school in Latvia could not develop because its beginnings, with all the roots were destroyed by the russification era (Pētersons, 1931, 90). J. Anspaks notes that K.Cīrulis, like Ž.Ž.Ruso, dreams of free people's upbringing in a free society, where work will be each person's obligation, however, he does not find the way out of such a condition, because he does not understand the laws of society development, without lifting up to the scientific revelation of contradictions between mental and physical work (Anspaks, 1975, 48).

In1920-1930s there are many theoretical insights on the importance of handicrafts in children's development. Several scientists–like J.Students, K.Deķēns, believe that the handicrafts satisfy the children's need to act. For the youngest school-age, according to J.Students, it is characteristic to have internal unrest, physical energy surplus, which can be eliminated by involving students into practical activity (Students, 1935). K. Dēķens, in his turn, indicates that the arm muscle finesse also promotes

brain development, develops the vision, touch, memory - especially in younger classes. The stuttering is treated by developing the efficiency of the right hand. K. Dēķens claimed that the right hand movements and speech centres are situated in the left hemisphere of the brain. By developing one of them, the other develops as well (Dēķens, 1919, 135).

Nowadays, there is an important K.Dēķens's cognition that it is necessary to cultivate work enjoyment, work initiative and confidence in pupils' own abilities. K. Dēķens's opinion that the teacher's ability to recognize each pupil's ability, to individualize the learning tasks, ensures the pupil's confidence in his forces. As soon as he experiences his ability, then his self-consciousness begins to grow as well as his drive to work (Dēķens, 1919, 114-115).

In this respect, it is important to see the pedagogical and methodological basics of composition worked out by M. and R.Bīlmanis, which expresses the idea that the composition up to the age of 13 and 14 is considered as a learning aid in relation to all subjects and not as an independent subject. M. and R.Bīlmanis emphasize that composition in the first school years is considered as a toy that promotes the child's imagination and ability development (Bīlmanis, 1920,7). The scientists include the pedagogical cognitions into methodic recommendations for teachers:

- composition is one of the easiest technical work processes, however, it includes links to extensive brain centers' and by basing on the tactile sensation of children provides them with the most impressions,
- composition work in accordance with the child's age develops and multiplies his tactile sensation and arm musculature; by including in itself creative process elements, composition expresses and develops the child's sense of beauty and creative inclinations (Bīlmanis, 1920, 8-12).

In the middle of 1930s the curriculum contains the same place for practical work as for other subjects. As it is emphasized by "The Handicraft Curriculum for Folk High Schools", the teachers of this subject must be sufficiently prepared because there is an entirely new suggestion in handicraft teaching - the child has to familiarize himself with the objects, to disclose the object properties, he must come to the conclusion, to judge, to find the truth. Only the self-found truth is real "(Pamatskolu programma…, 1935, 11). It is to say that nowadays this topicality is as important as the existing offer in the folk handicraft curriculum for students to work in groups, as well as the recommendation to organize excursions in order to collect the materials (reed, wicker, straw, roots, branches, etc.) which are later used for preparation of various products (Tautskolu rokdarbu…, 1925, 20). In practice, however, at schools in 1925 physical work and handicraft lessons are considered to be an unnecessary subject that can be taught or even avoided by finding such excuses as shortage of funding, premises and other deficiencies.

In its turn, in theory later pedagogical writings also reveal and expand the role of the handicraft in pupils' development. A great benefit in the development of handicrafts study is a pedagogical justification by R.Zeidels that handicrafts and related movements, senses are not the only source of knowledge, but there is a foundation for harmonious education and training. He explains harmonious education as education that corresponds to human nature and, in particular, to the physical, mental, social and moral, where the quality and not quantity is important (Zeidels, 1926, 8).

Many of the scientists' thoughts proved their importance over the years, they are still relevant today. One of those is the assertion that the handicraft study is training of the future and method of mentoring, and the only one that is able to meet all the requirements of harmonious upbringing (Zeidels, 1926, 12).

Like K.Dēķens, also R.Zeidels recognizes creative work. They asserts that in creative activities children have a chance to show their abilities and it is important for them to gain assessment for themselves and their work. According to the author, a proper assessment can be provided only by the person who has created something by himself. R.Zeidels recognizes that handicrafts is an experimental study, it is a challenge to the theory of some theoretical study that provides with certain foundations and interest (Zeidels, 1926, 18-26).

Although in 1920s – 1940s theoretical basics of handicraft study in the children's development is a new twist in the handicraft study, however, according to J.Greste, both theory and school go their own ways (Greste, 1990, 125).

Nowadays, integrated teaching that was started in 1920s – 1930s regains its topicality. I. Kjaiss admits if subjects with appropriate learning content follow one another in quick pace with a 45-minute interval, then this style does not leave space for interests even in a genius head (Кяйс, 1991). Currently the situation is similar because as a result of the reformation of the teaching content of Home Economics and Technologies and its implementation the reduced number of lessons from 2 lessons to 1 lesson per week reduces the pupils' development *opportunities on the half*, yet 25% from this time has to be devoted to theoretical learning. It is specified by the words – understands, knows, is familiar with, sees, differentiates, understands, realizes, recognizes feels (Noteikumi par valsts…, 2013).

The cognition already expressed by L. Taivan that it is necessary to apply the learned success to real life conditions (Taivāns, 1935, 62-66) corresponds to one of the didactic principles in National education curriculum that pupils learn better when the learning process is based on the pupil's practical life experience, i.e. emphasizing learning based on practice (Valsts pamatizglītības..., 1998, 9). Consequently, the integrated curriculum is one of the options to bind the theory to practice.

The study content of Home Economics and Technologies is also included in the integrated training. Modern subject aims and objectives that are focused on the pupils' harmonious development, work skills creation and their using opportunities are topical both in the traditional lessons system and in the integrated training.

Thinking about the theory of the study of Home Economics and Technologies being realized in practice in the aspect of pupils' development, it is necessary to adhere to the principle of pragmatism, which gives pupils the opportunity to be aware of the knowledge gained, the necessity of skills and their usability in real life situations, in the processes of exploration of the surrounding world, respecting the multiformity of the content – the unity of educational, developing and instructional functions. Choosing a content personalization and differentiation according to the principle of pragmatism it is necessary to emphasize the national, local and regional educational content components, as well as to ensure the systematic approach, the inclusion of the principle of free choice into the created integrated teaching content which is being implemented into the learning process at Riga Teacher Training and Educational Management Academy. Throughout the process of studies and learning it is beneficial learning environment that encourages students'/pupils' creative activity, for their own joy, while developing spirituality, respecting the balance of spiritual and physical strength. Clearly, the most important aspect in the Home Economics and Technologies learning process for students, prospective teachers are pedagogical practices in elementary schools, in which students gain experience for the implementation of the theory in practice, especially thinking in terms of the pupils' development.

In order to understand study and analyze the problematic aspects of the study of Home Economics and Technologies in terms of the pupils' development, the research was conducted in conjunction with the Riga Teacher Training and Educational Management Academy including the 4th year full and part-time prospective teachers in forms 3 of the elementary school. In total, 927 results of pupils' activities were analyzed at the lessons of Home Economics and Technologies in urban and rural schools.

The author chose some evaluation criteria for the implementation of theoretical approaches of the studies of Home Economics and Technologies to their assessment in practice, for which there are developed the indicators corresponding to a theory (Table 1).

Teachers' skills to realize the multiformity of the content were found out within the progress of the research, i.e., the unity of developing, educational and instructional functions; the-author analyzed the objectives and tasks formulated by teachers. The author concludes that here is a significant difference between teachers-practitioners and students-trainees. According to students, it is the most complicated thing in the whole training process to formulate the objectives and tasks in terms of pupils' development. In practice, it is observed that teachers-practitioners mostly associate their objectives

with implementation of a definite training content, but the learning process is organized in conjunction with the educative aspect, it is harder to find tasks in connection with the pupils' development for those pupils who are gifted, especially in urban schools in those classes where the number of pupils is 30 and more.

Table 1

Theoretical cognitions indicators of the study of Home Economics and Technologies

No	Theoretical cognitions within the aspect of pupils' development	Indicators
1.	Selection of training tasks	• product with a practical application, pupils work with enthusiasm because they experience interest, need, • pupils fulfill the tasks according to the teacher's requirements without enthusiasm, because there is no practical application for the tasks, they are uniform and long-lasting • pupils perform the task in a bored manner because the tasks do not correspond to the interests of the pupils', their needs.
2.	Pupils' ability to cooperate by working in a group	• pupils negotiate regarding the allocation of responsibilities, carry out the duties and evaluate the accomplished result, • pupils agree on the allocation of responsibilities, but not all of the pupils get involved in the work process, • pupils are not able to split duties, the activity is chaotic, there are pupils who do not participate in the process of work.
3.	Pupils' ability to work independently according to the work description.	• are able to perform tasks independently • help is needed for the fulfillment of the tasks • are incapable of performing tasks autonomously.

The situation is different with students-trainees, who have mastered the skills to articulate the objectives, separately highlighting educational, developing and instructional functions, but its realization, in turn, causes problems, but it is a matter of experience and practice. Among the teachers involved in the research there were also the teachers who had graduated from Riga Pedagogical School No.1 or a Teachers' Institute. They recognize that a pedagogical practice has been the most important thing throughout the learning process, which consisted of several stages and conditions:

- practice runs on a regular basis, i.e., one day a week, according to a specific training plan,
- during the week prior to the day of practice the lesson plan (synopsis, methodical handouts) has to be coordinated with a teacher and a practice coordinator-methodologist of a pedagogical school,
- a student runs a handicrafts lesson in the presence of a teacher, pedagogical school practice coordinator-methodologist and ten students (the rest of the course run other lessons in the presence of other methodologist),
- after the conducted lesson there is a students' introspection, a teacher's, methodologist's and students' analysis,
- at the conclusion of practice one day is the day of a seminar with an exhibition of the methodological materials developed by students and public speaking, sharing experience.

It is to admit that this would be a successful experience, which should be introduced into the progress of a modern pedagogical practice, because experience has shown that students' professionalism increases significantly if the practice is guided by a professional teacher, methodologist.

During the research the author found out form 3 pupils' ability to work independently according to the work description. Results were evaluated according to selected criteria (Figure 1):

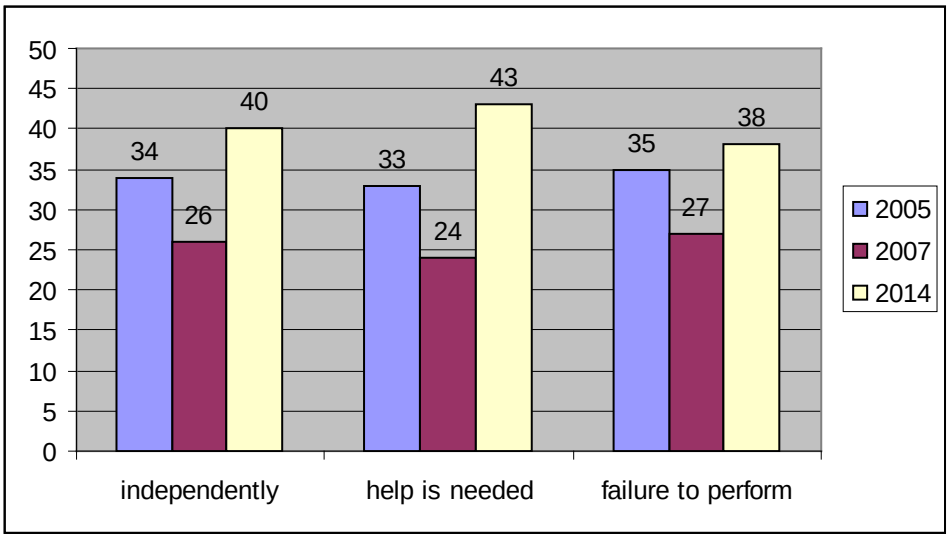

Figure 1. Pupils' ability to work independently according to work description*:*

The research compared pupils' skills to work according to the work description for several years (Volāne, 2008b). The number of students who have mastered the skills to work independently has risen a little at 35% (it was 34% in 2005; it was 33% in 2007). The number of students who need help has also increased — 27%. It is nice that the number of pupils who cannot cope with the task by themselves has decreased - 38% (40% in 2005; 43 % in 2007). However, the author has noticed that there are teachers who often carry out the task instead of a pupil, get the pupils accustomed to the idea that the teacher will help. As a result, pupils even do not dare to do the work themselves, because they wait for the teacher's approval.

It should be noted that the situation may not be unequivocal as the pupils' skills and work quality are promoted by a teacher's proficiency, a skill to get pupils interested into the training process. It was observed that the pupils are much more independent in their actions in any situation in those forms where teachers provide students with the ability to work independently in *a variety of ways* (according to the description, work sheets, technical drawing, and orally formulated task). The author concludes that the pupils are more independent if the teacher includes such forms of work into the training process which allow students to judge, perform and analyze by themselves, pupils are much more active and independent than in cases when they only reproduce the teacher's activity, regardless the fact whether the teacher works in an integrated manner or traditionally. The survey shows that teachers more often use conversations and frontal work as work organization forms. Despite the diverse content of Home Economics and Technologies and its different nature, the pupils' actions are based on the teacher's explanation. Teachers prefer this type of activity because it is easier to assess the pupils' individual achievements.

The situation is more complicated in regard to work organization that is connected with acquisition of pupils' cooperation skills. Teachers recognize that for pupils when doing group work it is easier to observe and evaluate pupils' cooperation, the ability to negotiate. In their turn, the pupils recognize that it is much harder to work in a group than individually because everyone wants to make the most interesting work, to achieve results more quickly, hence without hearing other pupils' thoughts. There are students who say they do not like the existing noise in the classroom while completing group work. It is to admit that this situation is observable in integrated classes led by students, if they have not made an arrangement with the pupils regarding evaluation criteria, one of which is a skill to talk softly. After the discussions, pupils also concede that it is easier to do the pair work.

The author's opinion is that the content of 'Home Economics and Technologies" over the past nine years has been more oriented to learning theory in elementary schools, which is in contradiction with the cognitions of the authors analyzed above. There is also a contradiction between the didactic principles of learning – the unity of theory and practice. For example, to meet the essential requirements for form 3 – *they know how to characterize the quality of food items according to their*

external features, to cook simple dishes without the use of heat treatment; they can lay the table for an easy daily meal, deal with cutlery, behave well while eating – observing all the necessary safety and hygiene requirements, is impossible due to the decoration of a classroom, materially-technical equipment in elementary schools (Volāne, 2008a). After consultations with the teachers it was found out that none of the elementary handicrafts lessons take place in a special classroom of Home Economics, due to the fact that this change of rooms and classes is an overcomplicated process, besides teachers of Home Economics are not willing to let the elementary school pupils into their classroom which is suitable for pupils from form 5, and the number of girls is twice as little as the number of pupils from forms 1-4. The author has observed that in some of the elementary schools (pupils study there from forms1-4) there is no classroom of Home Economics at all.

With respect to the choice of products according to the training content the results obtained are different. It depends on a number of reasons. One of them is the correspondence of the product to individual pupils' abilities, sometimes they are either too easy (28%), or too complex (15%). As a result, pupils lose interest. It is proven by the results of the questionnaire in form 3. 31% of pupils in urban schools recognize that the selected works are mainly paper works, and they do not generate interest, when working from form 1 already. Consequently, pupils' interests are not respected in development patterns, there is no guarantee that the development is ensured from the simplest to the most complex things. Many students lack the patience; they rush in order to obtain faster results. As a result, both the quality of work and the pupils' satisfaction with their work suffer. The results aggregated within the time period of several years show that quality of work during the lessons decreases with each year, while the number of superficial works increases. It is contributed by the limited time that is one lesson a week. It is harder for teachers to choose and offer handicrafts technology tasks corresponding to the boys' interests and needs (36%). It has been noticed that successfully selected tasks, which are interesting, with practical applications or using new handicraft techniques are important for students (21%).

Research has been carried out in different schools during students' integrated practice. In order to find out pupils' interest in acquiring the study content of Home Economics and Technologies while working in the integrated way or traditionally, a survey of teachers and pupils was conducted. The most common teachers' replies: "Pupils' wish to learn a new craft technique is determined by the elementary teacher's pedagogical experience and erudition. The most essential thing is the choice of tasks according to the pupils' interests, especially when thinking about the handicraft techniques corresponding to the boys, which is not always considered to be successful. Several teachers admit that the difficulty is caused by the types of handicraft, associated with a defectively developed finger muscles. As a result, pupils get tired, lose focus, their will diminishes.

In their turn, the pupils of form 3 explain that it is more interesting to learn in the integrated way, but more seriously at ordinary lessons. There were pupils who claimed that they would learn in the integrated way, as they could operate independently, and it was interesting. In this context, the teacher-student's evaluation: "I believe that not everything was always conducted perfectly, although I was sufficiently prepared. Also, pupils have to get used to this type of work. They cannot hide the excitement about the changes in the life of the school, but it is hard work for teachers. The only satisfaction is pupils' emotions." The author agrees thoughts expressed by pupils correspond to O.Svenne's cognition that teachers limit children's self-performance too much by putting them in roles of passive observers and it is not enough for the children's energetic body (Svenne, 1930, 77).

According to the observations, the study content of Home Economics and Technologies within the aspect of pupils' development (also in integrated training), cannot be implemented by all teachers. The main problems are caused by a teacher's habit to work traditionally, the insecurities when implementing new forms of work. J.Greste sharply criticized the training where practical work was acquired without leaving the desk. He declares that work shapes a person, just like a tree, spade, plane and clay (Greste, 1990, 128).

Whereas an integrated learning is a complex technique (as it was considered in Russia), combined training (according to E.Pētersons), life learning (according to L.Taivāns), where the study content of Home Economics and Technologies is included into the whole curriculum content, then there are more

opportunities for pupils to acquire the study content of Home Economics and Technologies than once a week within the limited time in which the pupil is hastened. It also undeniably promotes each pupil's harmonious development.

Conclusions

- The significance of the study subject "Home Economics and Technologies" has to be viewable in pupils' development.
- It is typical to have mental, physical, intellectual unity and harmonization of emotions in the learning process of study subject Home Economics and Technologies. That would contribute to elementary school pupils' development, creation of work skills and acquisition of its values.
- The study content of Home Economics and Technologies at the elementary school within the aspect of pupils' development has to be implemented in procedural approach as an integrated subject or as an independent discipline. The variation of the content of Home Economics and Technologies, pragmatism, creative activity, guarantee of free will and the opportunity to meet individuals' needs are the preconditions for pupil's development.
- During the research the author ascertained that learning tasks of Home Economics and Technologies in the aspect of pupils' development are still not realized in practice. The recommended solution is a reformation of organization of practices for students, prospective teachers, which could include conference with exchange of experience and the exhibition of methodological materials made by students during the practice.

Bibliography

1. Anspaks J. (1975) *Progresīvās pedagoģiskās domas attīstība Latvijā 19. gs. otrajā pusē*. (Development of progressive pedagogical thinking in Latvia in the middle of the 19th century). Rīga, LVU, Latvia, 58 lpp. (in Latvian)
2. Bīlmaņi M. un R. (1920). *Veidošana skolā un mājmācībā*. (Composition at school and at home schooling). Rīga, Kultūras balss, Latvia, 40. lpp. (in Latvian)
3. Dēķens K.(1919). *Rokasgrāmata pedagoģijā*. (Teaching guide). Rīga, Kultūras balss, Latvia, 135 lpp. (In Latvian)
4. Greste J. (1990). *Krist un celties*. (To fall and to rise). Rīga, Zvaigzne, 304 lpp. (in Latvian)
5. Noteikumi par valsts pamatizglītības standartu, pamatizglītības mācību priekšmetu standartiem un pamatizglītības programmu paraugiem (2013). (Regulations on the State Standard of Elementary Education, Standards of the Elementary Education Study Subjects and basic curriculum). MK noteikumi Nr. 530. [online] [17.01.2015]. Available at http://likumi.lv/doc.php?id=259125 (In Latvian).
6. *Pamatskolu programma 35./36. m. g*. (1935). (The Elementary School Curriculum of 1935/1936). Rīga, Dzintars, Latvia, 220. lpp. (In Latvian)
7. Pētersons E.(1931). *Vispārīgā didaktika*. (General Didactics). Rīga, Gulbis, 130 lpp. (In Latvian)
8. Students J. (1935). *Bērna, pusaudža un jaunieša psiholoģija*. (Child's, Teenager's, Youth's Psychology). Rīga, Latvia, 735 lpp. (in Latvian)
9. Svenne O. (1930). *Modernie audzināšanas jautājumi.* (Modern education questions). Rīga, Ausekļa izdevums. Valters un Rapa, Latvia, 197. lpp. (in Latvian)
10. Taivāns L.(1935). *Jaunus ceļus meklējot*. (Looking for new ways). Rīga, Rīgas pils 5. īpatnējā pamatskola, Latvia, 167 lpp. (in Latvian)
11. *Tautskolu rokdarbu programma.* (1925). (Handicraft Curriculum of Folk High School*).* Rīga, Armijas spiestuve, 48. lpp. (in Latvian)
12. Volāne E. (2008a). *Mājturības un tehnoloģiju prasmes mācību priekšmeta standartā.*(Home Economics and Technologies Skills in the Subject Standard). Proceedings of the ATEE International Conference *Teachers in 21st Century*. LU, Riga, Latvia, pp. 281.– 288. (in Latvian)
13. Volāne E. (2008b) *Mājturība un tehnoloģijas sākumskolā jaunā mācību priekšmeta standarta skatījumā.* (Home Economics and Technologies at Pre-School in the Aspect of the Standard of Subjects) RPIVA IV Starptautiskās zinātniskās konferences ,,Teorija praksei mūsdienu

sabiedrības izglītībā" starptautiski recenzēts zinātnisko rakstu krājums. Rīga, SIA Rīgas komercfirma ,,S&G", Latvia, 391. - 397. lpp. (in Latvian)
14. *Valsts pamatizglītības standarts* (1998). (The National Standard of Elementary Education). Lielvārdē, Lielvārds, Latvia, 32 lpp. (in Latvian)
15. Zeidels R. (1926). *Rokdarbi kā harmoniskas izglītības un audzināšanas pamats.* (Handicraft as the Foundation of Harmonious Education and Upbringing). Rīga, Latvijas skolotāju savienības izdevums, Latvia, 31 lpp. (in Latvian)
16. Цируль К. (1894). *Ручной труд в общеобразовательной школе*. (Handicraft in the General Education School). СПБ, 190 с. (in Russian).
17. Кяйс И. (1991). *Выдержки из работ Йоханеса Кяйса.* (Extracts from works by Johannes Kyais). Москва, Проовещение, Russia. (in Russian).

Development professional education and career

Human Capital Managing Skills of the Long-term Unemployed Social Benefits Receivers

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Abstract: Level of unemployment is not increasing any more in Latvia. Changes quality of unemployed people – there are a lot of long-term unemployed social benefits receivers. They are not using their human capital to find job, they are additional burden to municipal budget and it causes social and psychological problems to unemployed themselves. The aim of research is to find out the way long-term unemployed social benefits receivers are looking on their human capital managing skill if they are training it or not and how it connects with their career development. On the basis of the Jean Piaget cognitive development theory a questionnaire developed by author were used. Long-term unemployed social benefits receivers registered in Riga Social Service were asked to take part in the survey. The respondents were asked to describe situation in which they would and would not like to be after 4 years (who they are at that moment, what are doing being there), also they were asked to mention what they are doing now to be in that situation after 4 years. From that questionnaire author got information about level of comfort being social benefits receiver. Author got information about respondent attitude and reflection of their own personality what will help in future to make a human capital managing skills developing program for long-term unemployed social benefits receivers.

Keywords: human capital, long-term unemployed social benefit receivers, career, managing skills.

Introduction

Unemployment level in Latvia by October 2014 is 8.2%, unemployment level in Riga by October 2014 is 5.2% (Bezdarba rādītāji…, 2014). There are 16.6% social benefits receivers in Riga for the past nine months of 2014, 37% of them are unemployed (2014. gadā Rīgā…, 2014).The level of unemployment is not that high, but Riga Social Department found out that there were more than one thousand unemployed in the city who did not receive any benefits and were potential receivers of social service benefits. It was also found that the average period of receiving benefits had been increased. There is a paradoxical tendency – the level of unemployment decreases, however, the level of the long-term unemployed social benefit receivers increases at the same time (Moors, 2012).
The long-term unemployed social benefit receivers are able-bodied persons which have received benefits more than 12 times within the last three years and were jobless at least 9 months (Pētījums par..., 2007), and have been receiving social service support at least for the last six months.

Working with long-term unemployed might be hard because they might be not concentrated only on job searching process, they are not interested in developing their personality, because they see reason of being unemployed for the long period of time (Леана, Фельдман, 1995). They are feeling hopeless, more negative and destructed. There should be done huge psychotherapeutic work before involving them into groups and working on their human capital managing skills.

It's important to show and explain to long-term unemployed the reason of being unemployed especially when economic state of country is not that bad and general rate of unemployed is getting lower.

To start work in that field is important to understand what human capital really means. There are a lot of different explanations, but author is going to use following: human capital is the sum of an individual's abilities and skills, which increases the individual's economic and social potential (Latvia Human…, 2007).

As theoretical base of research author is using constructivism theory because author believes that respondents are active human beings with their experience, believes, so they can actively participate in process of creating their future (learning is the big part of creating future). Working with adults it is important to use constructivism because they will produce their own decisions according to their

experience and reasons using information that their get during process of learning (National Council for Social Studies, 1998).

Analysing survey author is using personal construct theory which was devised by G. Kelly in 1955. Asking questions to long term unemployed social benefits receivers author is expecting to get information about their personal constructs (hypothesis). Theory believes that we like scientists are creating personal hypotheses about our experience, expectations and believes (Kelly, 2003). Each of us creates our own reality based on experience, beliefs, learning, reality is constantly changing because of external factors, so knowing personal constructs gives to specialists opportunity to change them through the process of learning. That might help create new personal constructs in order to change future and possibilities that person might or might not be using and producing.

Before G. Kelly J. Piaget (1896–1980) started to discover and analyse how children think about objects – number, duration, speed, distance. J. Piaget called it logical structures. He was interested how the way of thinking about objects develops and how it can be changed (Campbell, 2006).

Considering about human capital and personal constructs author, according to human capital definition, accepts that human capital (or its elements) is part of personal constructs. Each individual acts in order with his personal opinion (or construct) about his skills and abilities. It is hard to change person's skills or abilities, person needs a lot of training, learning to get some new skills, but it is possible and might take shorter period of time to change person opinion (construct) about his skills and abilities. Author considers that using of human capital depends of personal constructs, so knowing personal constructs it is possible to increase level of individual's human capital.

The aim of the article is to publish the results of the theoretical and empirical research carried out by the author of the article on human capital managing skills of the long-term unemployed social benefits receivers.

Methodology

The theoretical part of research consists of theoretical study of different human capital aspects as well as constructivism theory and various scientific approaches to the human capital managing theme.

To access human capital managing skills of long-term unemployed social benefits receivers as well as their view on their future and their constructs empirical part of research were invented.

A survey developed by the author consist of 4 questions which shows respondents ability to made constructs in their mind as well to understand which terms and conditions are involved in that constructs.

The participants were also asked to specify their gender, age, length of unemployment and level of education.

Research question:

How long-term unemployed social benefits receivers see themselves using human capital managing skills in a period of time?

Questions respondents were asked to answer:

1. What you want your life to be like in a one year? What are you doing right now to achieve it?
2. What you do not want your life to be like in a one year? What are you doing right now to achieve it?
3. What you want your life to be like in four years? What are you doing right now to achieve it?
4. What you do not want your life to be like in four years? What are you doing right now to achieve it?

The current empirical research where carried out in one of Riga Social Service departments. 37 long-term unemployed social benefits receivers took part in this research. The participants of research were as follows: 31 female (83.8%) and 6 male (16.2%) between age of 21 to 57 (Mean (M) = 40,5, Standard Deviation (SD) =11.2).

Results and Discussion

According to cybernetic model widely researched by E. Glaserfeld there two questions we need to ask. First, ontological, *What is the structure of real world?* and second, cognitive, *What is the structure of our experiential world?* The key point is that we are able to analyse structure of our experience without making the unwarranted assumption that to perceive must be a process of passive reception rather than a process of construction (Richards, Glaserfeld, 1979).

This theory goes against "classical" point of view that everything that happens affects our logical construct (or our world). That means that our experiential world might stay constant through all the life if we are able to analyse structures without making assumptions that may affect our experiential world. That means that working with long-term unemployed social benefits receivers might be useless because any information from outside is analysed separately.

From one point of view it means that any consultative work with "problematic" target group is useless, but from other point of view it shows reality – many long-term unemployed individuals are taking part in different type of groups, sessions, personal training, but they still stay unemployed, regardless all of the learning and training are made in order to help them find and hold the job.

William T.Powers model of cognitive functioning can be expressed with single claim – *behaviour is the control of perception* (Powers, 1973 cited by Richards, Glaserfeld, 1979). For all specialists working with long-term unemployed individuals it means that main work must be focused on changing individuals behaviour in that way changing their way of thinking and analysing objects. This work must be done constantly, watching over the progress of individual, that type of consulting preferably need to be done in personal sessions rather than group works. Unfortunately, nowadays that type of work is not provided to long-term unemployed social benefits receivers by any of local or governmental institutions.

It is important to understand personality of long-term unemployed social benefits receiver, to understand how he is seeing himself in his own world (compare it to real world). Working with human capital managing skills comes out individuals self-concept as a main actor of managing process – how individual thinks about himself, his skills, his knowledge and how he thinks he is able to use it.

According to R. Kegan's constructive-developmental theory adults see the world through their constructs they learn using those constructs as well (Kegan, 1982 cited by Mahler, 2011). For most of the long-term unemployed social benefits receivers it might be contradictionary, because biggest part of them is in their midlife, they have strong beliefs and constructs which is hard to change. Working with them means knowing and understanding their active constructs in order to be able to impact and made some changes.

Thirty seven long-term unemployed social benefits receivers took part in a research based in Riga Social Service. Giving answers to the first question *What you want your life to be like in a one year? What are you doing right now to achieve it?* all (100%) respondents answered that they want to get a job. What could be very logical, because all of them are out of the work for a quite long period of time. Only 12 (32%) of respondents mean what kind of job they want to get or at least mean the field where they want to get a job. This results means that mentioned respondents don't understand their own skills, don't understand what happens in labour market – what kind of professions are highly requested and where is possibility to get a job. Seventeen (47%) respondents mean that they need to improve their level of education in one or another way – improve language skills, get another qualification, get college degree. No one of them mentioned concrete skills or type of education he/she needs. It is not logically connected with their wish of finding a job. This result as well as previous are connected and shows that they are not familiar with real situation in the labour market, they don't have strategy of what there are doing or going to do what can show us that they are motivated only in their own minds and don't have real action plan. No one of the respondents answered that he after a year don't want to be a client of social service. There might be two reasons for it – first, person is planning to work and continue receiving social benefits, but in smaller amount; second, person haven't yet realised that getting a job means dropping of social service or at least getting smaller amount of social

benefits. No one of the respondents mentioned what there are doing now in order to achieve their wishes after a year.

Answering second question *What you do not want your life to be like in a one year? What are you doing right now to avoid it?* Thirty one (83%) of respondents answered that they don't want to be in the same situation as they are right now, just 10 (27%) of them mentioned what exactly they don't want to be again in a year – they want to have a job. No one mentioned category "education", so, it might mean that everyone, at least, would appreciate opportunity to study. Six (17%) respondents mentioned that they would like all they problems to be solved (Figure 1). That seems to be a non-human capital managing skills approach, because nothing can be solved without a plan or some ideas how to do it. Even if person need to solve problem, he need to understand what kind of problem he have, why, how it can be changed\solved and what follows next. As well as, it's obligatory to understand what kind of skills and knowledge person needs to solve it – it is possible to go through with all that we have or there is need to learn or ask for help.

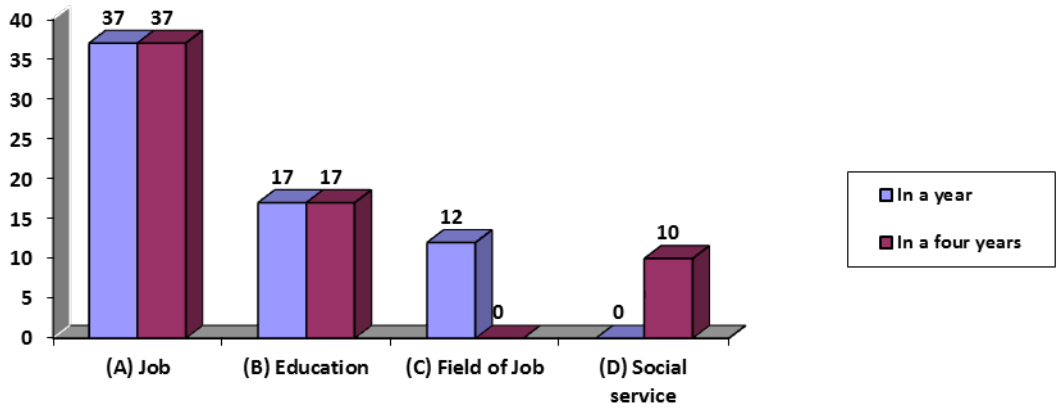

Figure 1. Comparising of respondents wishes what they life should be in a one year and four years. A- I want to get a job; B-I need education; C-I know what kind of job I want; D- I don't want to be a social service client.

Answering third question *What you want your life to be like in four years? What are you doing right now to achieve it?* again, all (100%) respondents answered that they would like to have a job. In order what they are doing right now to achieve it, 17 (47%) mentioned that they need or it would be good to start some courses, college, get another degree, qualification etc. no one of them mentioned that he is doing it right now or, at least, realised where and what exactly he might do. It shows us that respondents are not connected with reality and period of time "4 years" seems to them quite long to think accurate about it. No one mentioned how he is going to structure this period of time, e.g., in first year there is goal to achieve this, in second years this…etc. It shows us low level of time management skills which is part of human capital managing skills. From respondents answers to third question is hard to define some general terms with which we might operate in analysis, because answers are more likely about global change of live, finding job. No one of respondents haven't mentioned health as resource to get job as well as resource to hold the job. Respondents are mostly in their midlife, so health issue, as a resource, should be important to them. Ten (27%) respondents answered that they don't want to be social service clients, it is very reasonable, but author expected more answers in that category, because individuals are long-term unemployed social benefits receivers, so they might be interested in switching their lifestyle.

Answering fourth question *What you do not want your life to be like in four years? What are you doing right now to avoid it?* five (13%) respondents haven't answered to this question. 18% answered that they don't want to work abroad. Twenty five (69%) answered that they don't want life to be the same as it is now. Seven (18%) respondents shows us some way of strategy thinking – they are seeing themselves working in Latvia, which is good result, that shows us part of plan that individuals have, something quite concrete and unique, in comparison with other questions. People might be influenced

by stereotype that working abroad can't give anything or they might have their own bad experience that they don't want to repeat. Except that part, answers are not concrete, without any plan, or strategy inside, that can't show us human capital managing skills or understanding themselves as persons with strengths, skills and abilities (Figure 2).

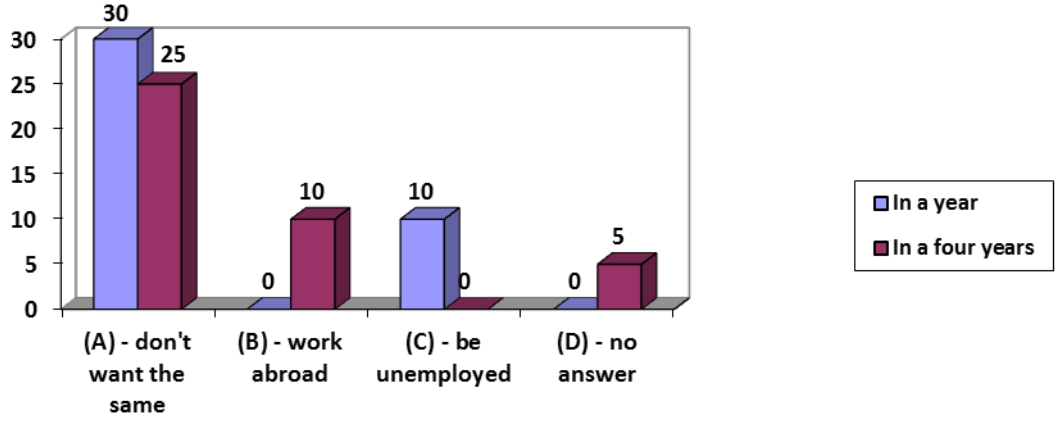

Figure 2. Comparision respondents wishes - what they don't want their life to be in a year and four years. A – don't want life to be the same; B – don't want to work abroad; C – don't want to be unemployed; D – respondents have no answer.

In general, for respondents it was easier to explain what they want towards what they don't want, it might be easily explained - people are concentrated on things they want to achieve and they can name it very fast, because they are thinking about it. Respondents have enough time to fill the form, but they haven't done it preciously, haven't filled all the lines explaining the situation. There might be two reasons for it – people are not interested in doing that or they just don't have information to fill in. mostly, answers are located in terms "education", "job", "change", "social service". Respondent group doesn't consist from very motivated individuals, so the results of research refer only to mentioned group.

Conclusions

For social workers, career counsellors and other representatives of helping professions it is good to know that working with long-term unemployed social benefits receivers in order to improve their human capital managing skills can have some struggled and special features:

- long-term unemployed social benefits receivers don't realize what exactly human capital managing skills are and does they have them or not, so working with them means splitting big term in small, understandable definition;
- clients are not motivated to work with their inner feelings and expressions, so it might be hard to understand what exactly happens;
- most of the clients are not able to create logical constructs to change future and have some plan;
- term human capital managing skills is not included in social work system in Latvia;
- long-term unemployed social benefits receivers are addicted to social system and only small percentage want to quite being a client of Social Service;
- long-term unemployed social benefits receivers don't have logical structure of their future;
- for long-term unemployed social benefits receivers it is hard to think about what they don't want to have/explore, rather than what they want to have, what can be shown as problem with imagination and making logical structures;
- the respondents are concentrated on finding a job, but not thinking about what exactly job they are going to find and how they are going to hold it;
- the respondents understood that they need to increase their level of education, but don't have exact plan or ideas where to get education and what kind of education is highly requested now.

Bibliography

1. Bezdarba rādītāji un NVA aktivitātes 2014. gadā (2014). (Statistics of unemployed 2014). Nodarbinātības valsts aģentūra (NVA). (State Employment Agency) [online] [07.01.2014] Available at http://nva.gov.lv/index.php?cid=6&mid=470&txt=480&t=stat (In Latvian)
2. Campbell R. (2006). Jean Piaget's Genetic Epistemology: Appreciation and Critique. Clemson University, p.36.
3. Kegan R. (1982). The evolving self: problem and process in human development. Harvard University Press, Cambridge, MA, ISBN 0-674-27231-5.
4. Kelly G. (1970/2003). A Brief Introduction to Personal Construct Theory. In *International Handbook of Personal Construct Psychology*. Fransella F. (Ed). John Wiley & Sons, Ltd.(first published in D. Bannister (Ed.) 1970 Perspectives in Personal Construct Theory. London: Academic Press), pp. 3 – 20.
5. *Latvia Human Development Report 2006/2007*. Sociālo un politisko pētījumu institūts (SPPI). (Social and Political Research Institute), Rīga, Latvia, p.120. [online] [10.01.2015.] Available at http://www.lu.lv/fileadmin/user_upload/lu_portal/projekti/citi_projekti/human-capital.pdf
6. Mahler E. (2011). Midlife Work Role Transitions: Generativity and Learning in 21st-Century Careers. *The Oxford Handbook of Reciprocal Adult Development and Learning* (2 ed.) p.65
7. Moors M. (2012). *Rīgas sociālās sistēmas attīstība: 2011 – 2012*. (Development of Social System in Riga: 2011 – 2012), Riga. [online] [07.01.2014]. Available at http://www.ld.riga.lv/tl_files/aktualitates/Projketi%20ERAF/Moors.pdf (In Latvian).
8. Nacional Council for Social Studies (1998) The Constructivist Social Studies Classroom. Policy Statement. p.10.
9. *Pētījums par ilgstošo sociālās palīdzības saņēmēju – bezdarbnieku iespējām darba tirgū Rīgas pilsētā.* (2007) (Research on opportunities in labor market of long-term unemployed social benefits receivers in Riga). Rīga, SKDS, Latvia, 91 lpp. (In Latvian).
10. Powers W.T. (1973). *Behavior: The control of perception*. Chicago: Aldine de Gruyter. ISBN 0-202-25113-6. 2nd ed. (2005) New Canaan: Benchmark Publications. Chinese tr. (2004) Guongdong Higher Learning Education Press, Guangzhou, China. ISBN 7-5361-2996-3.
11. Richards J., Glasersfeld E. (1979). The control of perception and the construction of reality: Epistemological aspects of the feedback-control system. *Dialectica* 33(1), p. 37–58. [online] [07.01.2014] Available at http://www.vonglasersfeld.com/055
12. *2014. gadā Rīgā trūcīgo personu skaits samazinās vidēji par 2% mēnesī*. (2014). (Level of low-income persons decrease by 2% in Riga in 2014). Rīgas Domes labklājības departaments (Riga City Council of Welfare Department), Latvia. [online] [10.01.2015]. Available at http://www.ld.riga.lv/relize/items/id-2014-gada-riga-trucigo-personu-skaits-samazinas-videji-par-2-menesi.html (In Latvian)
13. Леана К., Фельдман К. (1995). *Как справиться с потерей работы. Реакции индивидуумов, организаций и общественности на увольнения.*(How to deal with losing job. Reactions of individuals, organisations and society to being unemployed). М. Изд-во Всерос. газ. "Нива России", 175 с. (In Russian)

Career Guidance in Lithuania: Tradition or Fear of Change?

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Abstract: Career guidance has a long tradition in Lithuania that includes basic formal and non-formal education elements and levels and provides its fundamentals at secondary education institutions. In Soviet times, also, to a certain extent – nowadays, career guidance is more associated with students' achievements rather than the demand of specialists in the labour market. Although the integration of graduates into the labour market is a "hot" subject for scientists, practitioners, experts in the field at various levels, however, so far, there has been a tendency in Lithuania to educate traditionally popular (such as lawyers, economists), though excessively surplus in the labour market, specialists. This justifies the relevance of the topic and the aim of this article to investigate what actually determines – tradition or fear of change – that the career guidance system fails to respond flexibly to the needs of the Lithuanian labour market. The research methods employed are the analysis of scientific literature and legal acts, and secondary data analysis.

Keywords: career guidance, career education, career information, labour market.

Introduction

The purpose of career guidance is to help individuals consciously choose appropriate educational and employment opportunities, to create conditions to gain career skills, and actively develop their careers (i.e. a lifelong sequence of individually and socially significant personal learning, self-expression, and work experience). Career guidance is carried out by providing career education, career information and career counseling services (Lietuvos respublikos ..., 2012). On the intiative of the Ministry of Education and Science an open career information, career advice and career guidance system AIKOS, which helps consumers become familiar with relevant education and working registers, has been developed (Atvira informavimo..., 2014). Lithuania has a number of institutions working in the field of career guidance, such as career guidance information centres (CFI), the pedagogical-psychological services, career centres (operating at universities and republic youth technical creativity houses), the Lithuanian Labour Exchange, the labour market training offices and other organizations (including private). Since career guidance can be seen as one of the elements of lifelong learning strategy, the circle of career guidance system expands from secondary school / high school students to the unemployed seeking for retraining.

Given such a network of institutions, the situation embodies the attitutde that career guidance system works sustainably and efficiently. Is it confirmed by scientific research?

Social scientists are interested in various aspects of the system of career guidance. The peculiarities of career education modeling in Lithuania were reviewed by R. Kučinskienė (2003). In concluding the research in this area she claims that the research carried out on career education in Lithuania can be characterized as fragmented and lacking conceptual approach, multidisciplinarity, systematicity, and instrumentality (Kučinskienė, 2003). Education researchers in their doctoral dissertations analyze various career guidance (career education) aspects: V. Stanišauskienė (2000) investigates the socio-educational career preparation fundamentals, D. Garnienė (2006) deals with the model of career education in mainstream schools, A. Augustinienė (2007) looks into students' ability to make decisions regarding career education and career choice opportunities, and etc. Career guidance problems pertaining to concepts and issues of effectiveness are also revealed in scientific articles. A. Sokolova and V. Stanišauskienė assume that the existing different definitions of career guidance signify the complexity of the phenomenon and the lack of scientific justification. According to them, the researchers often deal with some of the elements or aspects of career guidance such as career counseling, career planning, and etc. rather than the career guidance phenomenon in general (Sokolova, Stanišauskienė, 2007). Scientists L. Ustinavičiūtė, A. Katkonienė, and I. Žemaitytė emphasize the importance of cooperation between parents and teachers (Ustinavičiūtė, Katkonienė,

2011), and V. Indrašienė, L. Grinytė, also L. Žadeikaitė and A. Railienė note the lack of systematic career guidance in secondary schools, even though it is carried out by a variety of professionals, i.e. teachers, social educators, and class tutors, who, due to their busyness, fall short of insight into career information, career advice and career guidance, and, thus, give grounds to the importance of the career counselors specialists (Indrašienė, Grinytė, 2007; Žadeikaitė, Railienė, 2008). With reference to the insights based on the results of the survey of vocational training school students, L. Žadeikaitė and G. Adomaitytė (2009) highlight the lack of systematic information as regards the matters of career guidance not so much within the institution but rather outside the institution. In the analysis of youth employment policies and career guidance of Northern Lithuanian students, L. Liukinevičienė highlights the need for deeper empirical research (Liukinevičienė, 2011). The experience of foreign scientists as regards career education perspective is very valuable. A. Racene and V. Dišlere examined the assessment of online tool application for career counseling (Racene, Dišlere, 2014, 200-207).

The overview of theoretical sources reveal, on the one hand, the achievements of career guidance system, on the other hand, it highlights the underlying problems. This justifies the topicality of the problem and highlights the main question related to the problem: what is career guidance in Lithuania based on: tradition or fear of change?

The object of the article is the possibilities of the change in the system of career guidance in Lithuania. The aim of the article is to discus the system of career guidance in Lithuania and justify the need for its change.

The research methods employed are the review of the career guidance system legal framework, the analysis of scientific literature, and the analysis of secondary data.

Methodology

The analysis of theoretical sources in this article revealed the peculiarities of career guidance. Though the scientific literature provides the analysis of individual aspects of career guidance, however, there is a lack of profound empirical research, all the more so, the existing ones identify the current problems, the solution of which could improve the efficiency of career guidance activities.

On that basis, the following research questions have been set:

Does the existing legal framework of the Republic of Lithuania ensure successful work of the career guidance system?

Does the career guidance system provide qualified career education services to the consumers of these services?

What should be done that the career guidance system be more consistent with the Lithuanian labour market needs?

This article employs the research methodology developed in accordance with the general social research methodology and scientific works of education scientists (Punch, 1998; Bitinas, Rupšienė, 2008; Walliman, 2006).)

The diagram of research organisation logic is given in Figure 1.

Figure 1. Logical diagram of the research into the change feasibility in the system of career guidance in Lithuania.

In order to find the answers to the main research questions, the following research methods into the change feasibility in the career guidance system have been employed: the review of Lithuanian legislation regulating career guidance, and secondary data analysis.

Results and discussion

The review of the Republic of Lithuania legislation regulating the activities of the career guidance system. The legislation regulating career guidance reviewed in this article are presented in Figure 2.

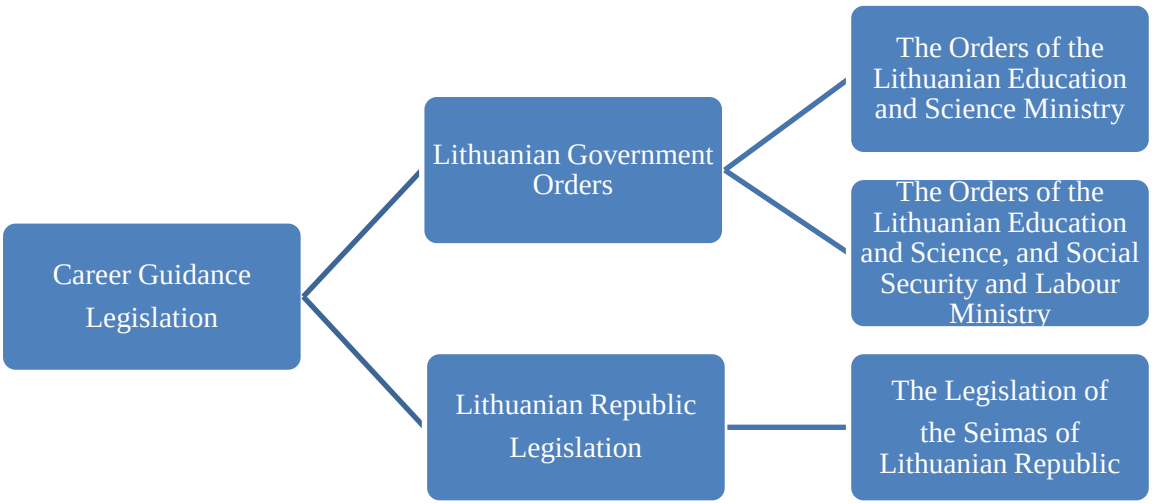

Figure 2. Legal Regulation of Career Guidance.

Figure 2 describes career guidance as the process that involves career information and career counseling in the Act of Vocational Education in the Republic of Lithuania. Figure 2 of the Act specifies the following:

- career guidance services are provided to all the residents in Lithuania,
-
- career guidance is implemented in secodary schools, vocational education institutions, career guidance cetres, and labour exchange under the order established by the Ministry of Education and Science together with the Ministry of Social Security and Labour,
- the Executive Institution of the Municipality plans, organizēs, and administers career guidance in accordance with the order established by the Ministry of Education and Science together with the Ministry of Social Security and Labour (Lietuvos Respublikos...,1997).

Career guidance is also regulated by other legislation. Law on Amending Article 18 in the Act of the Education of the Republic of Lithuania presents the following purpose of career guidance: career information, career counseling, and career education is a tools to help a person choose his proper education and employment, obtain career planning and management skills, and actively develop their professional careers (Lietuvos Respublikos..., 2011). As career guidance is implemented by a wide network of different ranks, for the purpose of their consistency, the Ministry of Education and Science of the Republic of Lithuania and the Ministry of Social Security and Labour of the Republic of Lithuania approved the description of carer guidance procedure. This order regulates the procedure of career guidance in secondary schools, vocational education schools and other educational institutions (except for higher education), career guidance centers, employment agencies and other institutions

(Lietuvos Respublikos..., 2012). According to this document, the purpose of career guidance is to help individuals consciously choose proper education and employment opportunities, to create conditions to gain career skills, and actively develop their careers (i.e., the sequence of lifelong individually and socially significant personal learning, self-expression, and work experience). The Act emphasizes that the main educational institutions providing career guidance services to the students are secondary schools and vocational training institutions, and that career education is a priority area of career guidance, career information and career counseling are complementary to career education, and help individuals address specific career issues. Previous legislation also focus on vocational information, as constantly available and accessible to all service, enabling a person to make rational decisions in choosing a profession, career planning by combining self-expression and individual development needs with the labour market requirements (Lietuvos Respublikos..., 2007). This Act distinguishes the

following career information speciālists: career information tutors, career counselors, social pedagogues, school psychologists, career tutors, vocational teachers, general education teachers, and classroom teachers. The adoption of career education program established the procedure for implementing this programme in schools following general education and / or vocational training programmes. This programme raises the main career education goal to effectively develop and create opportunities for all students to develop career competencies, to support the students in the process of self-cognition, self-development, and self-realization. Also, the career competences framework, and the guidelines for their development and evaluation are provided (Lietuvos Respublikos..., 2014). Therefore, it can be said that legal regulation of career guidance in Lithuania reflects the challenges of our time for education. On the other hand, no legal "barriers" have been developed for the training of socially attractive, but "oversaturating" the labour market professions.

The efficiency of career guidance: secondary data analysis. 2012 - 2013 student career guidance (career education) monitoring report emphasizes the functions of participants in career guidance system, which can, therefore, be summarized as follows: the Ministry of Education and Science supervises the quality of career guidance, performs the monitoring of the process, its results and other aspects and provides priority services areas; the Centre of Lithuanian Students Non-Formal Education is involved in monitoring students' career guidance at the state level; the Centre of Education Information Technologies Centre ensures information services for the career guidance system monitoring; Municipalities organize and conduct the monitoring of career guidance of students and people not in education (up to 21 years) in their territory; the school organizes and carries out the monitoring of students' career guidance at school (2012 - 2013 m.m. mokinių..., 2014).

The success of career guidance is determined by a consonant work of all the institutions, but it is especially important in the initial links in the chain, i.e. career information centres (further CFI), which include close to 700 formal and non-formal education and training institutions, vocational training, employment, culture and re-socialization, and other institutions (Profesinio informavimo..., 2014). The network of the mentioned institutions is presented in Figure 3.

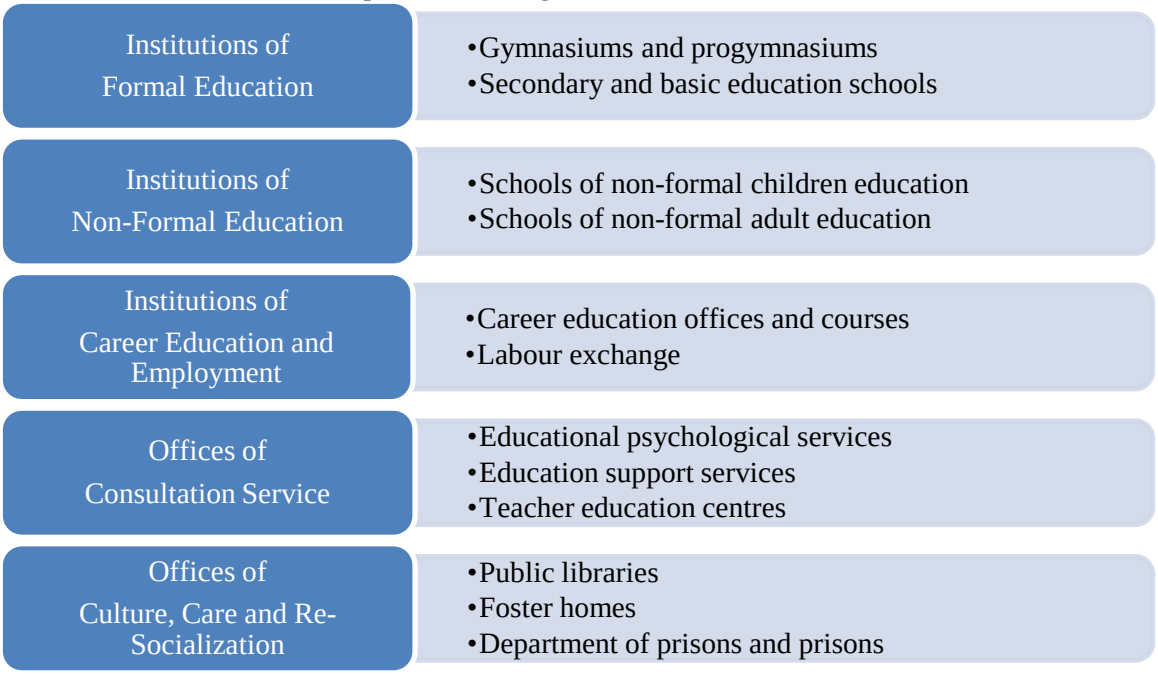

Figure 3. Institutional Network of Career Information.

Career information centres operate under general regulations approved by the Director of the Lithuanian Youth Information and Technical Creativity Centre (PIT bendrieji nuostatai, 2008). According to this document, career information centres, the places for career information services with free access to the Internet, access to the country's education and labour market databases, and accumulated information electronically and in print. CFI realize these services by carrying out the functions assigned to them: collect data on occupations Lithuania and information about the country's

vocational and higher education institutions (enrollment, curriculum, qualification aspects); collect, analyze and store information about the activities of the CFI; disseminate information about CFI services and expertise to the interest groups and the public; provide methodological assistance to the professionals of educational institutions, teachers and other workers on the issues of student career organization and enforcement.

On the basis of the best practices methodical material for career guidance specialists in the career information centres at education and training institutions was developed (Education Exchange ..., 2010). In summary, the CFI functioning at schools in different regions of Lithuania have the potential to act autonomously. They are affected by the particularities of the region, and education institution, the team coordinating CFI activities, and other factors. Although schools favour no particular higher or vocational schools through CFI activities directly, but there is a tendency that students of a certain region tend to choose the vocational training institutions that are closer to their place of residence. On the other hand, higher and vocational school representatives visit the schools in the same region more often than geographically distant from them.

To determine whether a career guidance system meets the needs of the labour market, the undertaken Lithuanian Labour Exchange specialist employment projections for the year 2014 were analysed. According to the barometer of employment opportunities, in 2014 weak employment opportunities were provided for the following groups of professionals: managers, lawyers, social workers, primary school teachers, kindergarten teachers, educators, economists, tourism managers, physical therapists, social educators, and psychologists (Įsidarbinimo galimybių barometras.., 2014). Little marketable professional opportunities for work in Lithuanian regions in 2014 are presented in Table 1.

Table 1

Regions of the least marketable opportunities for employment in 2014 (marked as x)

Specialists / Districts	Economists	Primary Education Teachers	Social Educators	Lawyers
Alytus	x		x	x
Kaunas	x		x	x
Klaipėda	x	x		
Marijampolė	x	x	x	x
Panevėžys	x	x	x	x
Šiauliai	x	x	x	x
Tauragė		x	x	
Telšiai	x	x	x	x
Utena	x	x		x
Vilnius		x	x	x

According to the data in Table 1 it can be said that the lowest employment opportunities in 2014 are projected for four professional groups, whose representatives could hardly find work in eight of the ten counties of Lithuania. If declining demand of primary school teachers and social educators could be explained by the demographic factors (population migration, fertility, and etc.), then the labour market "saturation" with economists and lawyers could be related to the tradition of augmentation of these specialties. According to the data of AIKOS (Open Career Information, Counselling and Guidance System), in 2014, 5 Law and 9 Economic Study Programmes were carried out in Lithuanian higher education institutions (Bendrojo priėmimo ..., 2014).

According to the data of LAMA BPO (Lithuanian Association of Higher Education Institutions for Joint Admission), the top ten most popular university programmes of study, as the first choice of the applicants, traditionally were VU Law and Economics study programmes and MRU Law and Customs, and Law and Pre-Trial Process study programmes. Study contracts in the mentioned study programmes for the state-funded, scholarships and target financing places were signed by 1329

entrants, or one-third of the students enrolled in the top ten most popular study programmes who received state or sponsor funding (LAMA BPO ..., 2014).

According to the data of Science and Education Monitoring and Analysis Centre (MOSTA), in 2014, the Law and Economic study programmes were chosen by the students whose entrance scores were among the highest in the percentage of those who enrolled in higher education. 42 students from 419 with the highest score (100), or every tenth entrant assigned to this category, made their first choice for VU Law (22 applications) and Economy (20 applications) study programmes. These programs were among top ten study programmes according to the applicant with the highest scores (100) choice (LAMA BPO ..., 2014). The fact that the traditionally popular, but low marketable study programmes, are chosen by the students with high scores is evidenced by a minimum of basic and supplementary competition score for the admission into to university study programmes with state-funded and state non-funded with scholarship study places. For example, minimum entrance scores for the Law study programmes at university were the following: dring the main admition - 6.66, and additional admission - 6.22. (LAMA BPO ..., 2014). (In 2014, due to the change in the calculation system of the competitive score, the transition to a ten-grade competitive score calculation method took place, according to which, the candidate who had the maximum maturity exam and annual evaluations could get the highest ten-grade competitive score).

Conclusions

- The monitoring and implementation guidelines of the career guidance system performance are regulated by the legislation of the Republic of Lithuania. The adoption of career guidance implementation procedure and career education programme allowed more opportunities to combine and coordinate activities among the various institutions in order to effectively develop and create opportunities for all students to develop their career competencies. Therefore, it can be said that any discrepancies between the profile of the trained specialists and their demand in the labour market are more to do with the inability to flexibly respond to the challenges of education in this area rather than with the lack of legal regulation.
- Career guidance is carried out by a wide network of institutions, and its customers are the representatives of more than 20 target groups of career informatikon. A network of career information centres at schools, vocational training institutions, employment agencies, and other institutions is developed to meet their needs. These institutions collect and disseminate information on professions, universities and vocational schools, provide methodological assistance to all interest groups on the issues mentioned. The result of career guidance is reflected in the statistics of enrollment in higher education institutions, the statistics and prognosis of graduate integration into the labour market, and other indicators.
- The analysis of the situation of the career guidance in Lithuania revealed the existing problems in this area. Some of them are related the lack of qualifications of the personnel in career guidance, other to the lack of coordination of activities among different institutions, and the rest to the fact that the problems in the field are solved too slowly. In order to find out where and what career guidance problems exist, and on that grounds, to adjust career guidance (career education) system, it is appropriate to carry out the monitoring of these processes and flexibly respond to the challenges of our time. As a result, the training of socially attractive, but unsalable in the labour market, professionals would be avoided, and, simultaneously, the number of qualified young unemployed reduced.

Bibliography

1. Atvira informavimo konsultavimo orientavimo sistema (Aikos) (2014). (Open Information, Counselling and Guidance System) [online] [15.12.2014].Available at http://www.aikos.ipc.lt/aikos/index.htm
2. 2012-2013 m.m. mokinių profesinio orientavimo (ugdymo karjerai) stebėsenos ataskaita (2014). (The Report of *2012 to 2013 Students Career Guidance (Career Education) Monitoring*). Vilnius. [online] [16.12.2014]. Available at http://www.mukis.lt/download/744/2012-2013%2520stebesenos%2520ataskaita_galutine.pdf (In Lithuanian)

3. Augustinienė A. (2007). Mokinių gebėjimų priimti karjeros sprendimus ugdymo galimybės bendrojo lavinimo mokykloje (The Possibilities of Students' Career Decision-Making Skills Development at Secondary School). Daktaro disertacija (Doctoral Thesis). Kaunas, Kauno technologijos universitetas, Lithuania, p. 284 (In Lithuanian)
4. Aukštojo mokslo studijų programų suvestinė pagal studijų kryptis ir kalbas (2014). (The Summary of Higher Education Study Programmes According to Study Areas and Languages). [online][15 .12.2014].Available at http://www.aikos.smm.lt/_layouts/15/Asw.Aikos.Reports/ViewReport.aspx?report=%2fStatistin%C4%97s+ataskaitos%2fSMPKR+statistin%C4%97s+ataskaitos%2fSMPKRAMProgramosPglStudijuKrKalbasEsama (In Lithuanian)
5. Bendrojo priėmimo į Lietuvos aukštąsias mokyklas 2014 m. apžvalga (2014) (*The Review of General Admission to Higher Education Institutions in Lithuania in 2014*). [online] [13.12.2014]. Available at http://www.mosta.lt/images/leidiniai/Priemimp_apzvalga_I_pakopa_2014.pdf. (In Lithuanian)
6. Bitinas B., Rupšienė L., Žydžiūnaitė V. (2008). *Kokybinių tyrimų metodologija.* (The Methodology of Qualitative Research). Vadovėlis vadybos ir administravimo studentams. (A Manual for the Students of Management and Administration). Klaipėda, S. Jokužio leidykla – spaustuvė, Lithuania, p. 304 (In Lithuanian)
7. Garnienė D. (2006). *Model of career education at general education school: parameters and realisation principles.* Summary of doctoral dissertation. Kaunas, Vytautas Magnus University, Lithauna, p. 31.
8. Indrašienė V., Grinytė L. (2007). Klasės auklėtojo veikla, organizuojant mokinių profesinį informavimą, konsultavimą ir orientavimą mokykloje (Class Tutor Activities in Organizing Student Career Information, Advice and Guidance at School) *Socialinis ugdymas (Social Education),* Vol. 3 (14), pp. 51-59. (In Lithuanian)
9. *Įsidarbinimo galimybių barometras 2014 metais Lietuvoje (2014).* (*The Barometer of Work Opportunities in 2014 in Lithuania*). [online] [17.12.2014]. Available at http://www.ldb.lt/informacija/darborinka/puslapiai/isidarbinimo_galimybiu_barometras.aspx (In Lithaunian)
10. Kučinskienė R. (2003). *Ugdymo karjerai metodologija*. (Career education methodology). Klaipėda, Klaipėdos universiteto leidykla, p. 229. (In Lithuanian)
11. *LAMA BPO. Bendrojo priėmimo rezultatai 2014 (2014).* (*LAMA BPO. The Results of General Admission in 2014*). [online][16 .12.2014]. Available at http://www.lamabpo.lt/bendrojo-priemimo-rezultatai/2014 (In Lithuanian)
12. *Lietuvos Respublikos Švietimo įstatymo pakeitimo įstatymas* (2011). (*The Amendment Law of Education of the Republic of Lithuania*). [online] [10.12.2014]. Available at http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=395105 (In Lithuanian)
13. *Lietuvos Respublikos Profesinio mokymo įstatymas* (1997) (*The Law of Vocational Training of the Republic of Lithuania*). [online] [10.12.2014]. Available at http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=295954 (In Lithuanian)
14. Lietuvos Respublikos Švietimo ir mokslo ministro ir Lietuvos Respublikos Socialinės apsaugos ir darbo ministro įsakymas „Dėl profesinio orientavimo vykdymo tvarkos aprašo patvirtinimo" (2012) (The Order of the Minister of Education and Science of the Republic of Lithuania and the Minister of Social Security and Labour of the Republic of Lithuania "Regarding the Approval of the Regulations for Career Guidance Procedures"). [online] [11.12.2014]. Available at http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=430003&p_query=&p_tr2=2 (In Lithuanian)
15. Lietuvos Respublikos Švietimo ir mokslo ministro įsakymas *„Dėl profesinio informavimo standarto patvirtinimo"* (2007) (The order of the Minister of Education and Science of the Republic of Lithuania *"Regarding the Approval of the Career Information Standard"*). [online] [15.12.2014]. Available at http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=293824&p_query=&p_tr2= (In Lithuanian)
16. Lietuvos Respublikos Švietimo ir mokslo ministro įsakymas *„Dėl ugdymo karjerai programos patvirtinimo"* (2014). (The order of the Minister of Education and Science of the Republic of

Lithuania "*Regarding the Approval of the Career Education Programme"*). [online] [15.12.2014]. Available at http://www.mukis.lt/lt/naujienos/ugdymo-karjerai-programa.html (In Lithuanian)
17. Liukineviciene L. (2011). Youth Employment Policy and Career Guidance of Schoolchildren in North-western Lithuania, *Socialiniai tyrimai (Social research),* Vol. 4 (25), pp. 64 - 74.
18. *PIT bendrieji nuostatai* (2008). (*CIF General Regulations*). [online][15.12.2014].Available at http://uks.lmnsc.lt/lt/pit-profesinio-informavimo-taskai/pit-bendrieji-nuostatai/(In Lithuanian)
19. Profesinio informavimo taškai (2014). (Career Information Centres). [online] [16.12.2014]. Available at http://uks.lmnsc.lt/profesinio_informavimo_taskai/ (In Lithuanian) Punch K. F. (1998). *Introduction to Social Research. Quantitative & Qualitative Approaches.* Thousand Oaks, Sage, p. 319.
20. Racene A., Dišlere V. (2014). Internet tools as a kind of career e-guidance. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality*. (REEP) No.7, LLU, Jelgava, Latvia, pp. 200 – 207.
21. Sokolova A., Stanišauskienė V. (2007). Profesinio orientavimo sistemos Lietuvoje teorinės ir politinės prielaidos (Theoretical and Political Assumptions of Career Guidance System in Lithuania), *Profesinis rengimas: tyrimai ir realijos (Vocational Training: Research and Reality),* Vol. 13, pp. 226 - 241. (In Lithuanian)
22. Stanišauskienė V. (2000). *Rengimosi karjerai proceso socioedukaciniai pagrindai (Socio-Educational Basics of the Career Preparation Process).* Daktaro disertacija (Doctoral Thesis). Kaunas, Kauno technologijos universitetas, Lithuania, p. 185. (In Lithuanian).
23. Ustinavičiūtė L., Katkonienė A., Žemaitytė I. (2011). Veiksniai, susiję su sėkmingu karjeros planavimu ir profesijos pasirinkimu paauglystėje (Factors Related to Successful Career Planning and Career Choice in Adolescence), *Socialinis darbas* (*Social Work*), Vol. 10 (2), pp. 169 – 179. (In Lithuanian)
24. Walliman N. (2006). *Social research methods.* Thousand Oaks, Californija, Sage Publications, p. 224.
25. Žadeikaitė L., Adomaitytė G. (2009). Profesinio orientavimo paslaugos profesinio mokymo įstaigoje: mokinių požiūris (Career Guidance Services in VET: Students' Attitude), *Socialinis ugdymas (Social Training),* Vol. 9 (20), pp. 35-47. (In Lithuanian)
26. Žadeikaitė L., Railienė A. (2008). Socialinio pedagogo veiklos galimybės profesinio informavimo sistemoje (Work Opportunities of the Social Pedagogue in the System of Career Information), *Socialinis ugdymas (Social Training),* Vol. 5 (16), pp. 51 – 58. (In Lithuanian)

The Principle of Gender Conformity in Women's Career Development

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Abstract: In any domain where a different situation between men and women is observed, the cause is the public's stereotypes on the role, behaviour, appearance, mental abilities, etc. of one or another gender. These viewpoints are obsolete and sometimes do not fit the real situation. One of the domains where a considerable influence of stereotypes may be observed is the choice of an education based on gender. The present paper includes the results of research on the influence of gender conformity principles on women's career development. The research aim is to find out whether the principle of gender conformity is present in women's careers. A questionnaire survey of practicing career consultants was carried out to achieve the aim. The survey revealed what communication theory statements on women might be attributed to women in Latvia and whether there were stereotypes regarding women's and men's professions and whether the glass ceiling might be observed in women's careers. Finally, it was concluded that even though gender equality theoretically existed in Latvia, there were still some stereotypes on men's and women's professions; the glass ceiling was not a widespread phenomenon, while in some kinds of jobs it might be observed, and the reality in Latvia was in line with the gender communication theory and communication differences might be observed for women in a team. The present research will contribute to the understanding of women's career barriers and encourage conducting in-depth research on gender equality in Latvia and the EU.

Keywords: women's career, glass ceiling, gender conformity principle, gender equality, adult education.

Introduction

It is believed that individuals have limited choices of professions and occupations with regard to gender, ethnicity and social class. As regards gender, women have no seemingly limited choices of any profession if it is not historically accepted that this is a men's profession or a job position may be held by an individual of a certain stereotype.

With regard to the equality of men and women, Article 23 of the Charter of Fundamental Rights of the European Union stipulates that equality between men and women has to be ensured in all fields, including employment, occupations and wages (Charter of Fundamental Rights of the European Union). The equality of men and women is one of the key values in the EU. Already in 1957, the Treaty of Rome which laid foundations for the European Economic Community included a principle that equal wages have to be paid the same work (Konsolidēts EK..., 2001).

The European Union's achievements concerning equality between women and men have positively affected the life of many Europeans. This may be explained by the implementation of the following activities:

- legal acts that stipulate equal treatment;
- an integrated approach to gender equality (gender equality related aspects are integrated into all the domains of government policy);
- specific activities aimed at supporting women (Gender Equality in the European Union, 2011).

A positive trend may be observed over recent years in the EU Member States – the number of women in the labour market increases and better education and training contribute to their achievements. The Strategy for Equality between Women and Men (Strategy for Equality between Women and Men 2010-2015, 2010) reflects with the European Commission's agenda with regard to gender equality for the period 2010-2015. The European Commission undertakes to contribute to integrating gender equality in all its policies, setting the following priorities:

- equal economic independence between women and men;
- equal wages for the same work;

- equality of rights in making decisions;
- respect, integrity and the termination of gender-related violence;
- contribution to gender equality outside the EU;
- horizontal issues (gender roles, legal acts and administrative instruments) (Strategy for Equality…, 2010).

The Strategy for Equality between Women and Men emphasises the contribution of gender equality to economic growth and sustainable development and advocates the inclusion of the gender equality dimension into the strategy Europe 2020. Europe 2020 is an EU growth strategy for the next decade. The strategy is based on certain activities at the EU and national levels. One of the key targets of the strategy is the employment rate for individuals aged 20-64 that has to increase from the present rate of 69% to at least 75%, and a higher rate of women employment has to be reached as well (Eiropa 2020..., 2010). However, gender differences are still present in the labour market, and women are still more represented in low-wage industries, whereas in job positions that involve decision-making women are represented insufficiently. In Latvia and the EU, gender mainstreaming is used in making gender equality policies, which means that the effects of laws, policies and activities on the situation of both genders are examined for all the domains of activity and at all the levels, and all the government institutions responsible for economic sectors have to be engaged in applying the approach (Plāns dzimumu..., 2012).

On 13 June 2013 in Brussels, the European Institute for Gender Equality presented the European Union Gender Equality Index. The index shows the differences in various domains between women and men for all the EU Member States. The Gender Equality Index is a unique instrument that contributes to fact-based government policies and indicates the political priorities to be changed in order to foster the formation of a gender-equal Europe (Gender Equality Index area, 2013). The average score of the Gender Equality Index for the European Union is equal to 54 (1 means absolute gender inequality and 100 stands for full gender equality). Latvia's index score was lower than the EU average, 44.4; the index score of Estonia was 50.0 and that of Lithuania stood at 43.6. The highest scores of the index of equality between women and men were in the Nordic countries: 74.3 in Sweden, 73.4 in Finland and 73.6 in Denmark, as well as in the Netherlands with 69.7 and Great Britain with 60.4. The lowest ones were in Romania with 35.3 and in Bulgaria with 37 (Gender Equality Index in Latvia, 2013). The Gender Equality Index shows the averages indicators in the following domains of gender equality: work, money, knowledge, time, power and health. At the European Union level, the greatest difference between men and women was observed in the domain of power, with the gender equality score standing at only 38. This was the only domain in which Latvia's score was higher than the EU average, reaching 38.6 (Estonia had 27.5 and Lithuania had 32.1). The second domain with the greatest difference between both genders was the domain of time. This is the domain which involves indicators on time being spent on caring for children and other family members and performing household duties and on voluntary work and other leisure time activities. The average gender equality score in this domain for the EU stood at 38.8. In Latvia it was 35.2, 24.1 in Lithuania and 51.4 in Estonia. In the domain of health, Latvia's score was the lowest among all the EU Member States, 77.1, which was far behind the EU average, 90.1. Lithuania's score in this domain was 84.9, while Estonia's score stood at 83.8 (Gender Equality Index in Latvia, 2013).

The health indicator analyses differences in heath condition between the genders not only in terms of self-assessment, as Latvia's women assess their health lower than men, but also in terms of life expectancy, healthy years of life and availability of medical and dental services (Gender Equality Index in Latvia, 2013). The research aim is to find out whether the principle of gender conformity is present in women's careers.

Methodology

A survey of practising career consultants was conducted from December 2014 to January 2015 in order to find out whether career consultants have practically observed gender communication differences during their consultations as well as work equality problems for women. The survey involved 48 career consultants aged 26-62, and all of them were women.

Research tasks:

- to give a theoretical discussion on the principle of gender conformity in women's careers;
- to analyse the principle of gender conformity in women's careers in the consultation process from the viewpoint of respondents.

Legal acts and other information sources were used to achieve the aim and execute the tasks. To analyse statistical data, statistical analysis methods were employed: descriptive statistics. A sociological research method – a questionnaire survey – was used to identify the principle of gender conformity in women's careers. Research sites: social networks.

Results and discussion

In any domain where a different situation between men and women is observed, the cause is the public's stereotypes on the role, behaviour, appearance, mental abilities, etc. of one or another gender. These viewpoints are obsolete and sometimes do not fit the real situation, as well as there is a disproportion of women and men at all educational levels, especially among preschool pedagogues. The traditional choice of an education and career based on gender is one of the most significant factors for segregation in the labour market by gender and, accordingly, for differences in wages between men and women, for an inelastic labour force, etc. The objective of gender equality policies in Latvia is not to reach equal numbers of men and women in all professions or industries, but to reduce the visible and invisible obstacles that prevent women and men from choosing a non-traditional education and profession for their gender (Plāns dzimumu..., 2012).

Fortunately, a positive trend towards women's equality might be observed in the labour market over recent years. Nevertheless, there are industries where mainly women are employed and vice versa. An analysis of data of the Central Statistical Bureau (CSB) for the period 2009-2013 reveals that in 2013, there were domains in Latvia where women were more often represented than men, and they were: in education women were more employed than men by 12.0%, in health and social care by 7.5% and in marketing by 6.8% (Nodarbinātie pēc..., 2009-2013).

The data of the Central Statistical Bureau broken down by profession and gender for 2014 (Figure 1) reveal that there were professions in Latvia in which women were much more represented than men: among service and marketing employees, women were 16.0 percentage points more represented than men, among senior specialists 10.6 percentage points, among servants 5.7 percentage points and among specialists they were 5.8 percentage points more represented than men.

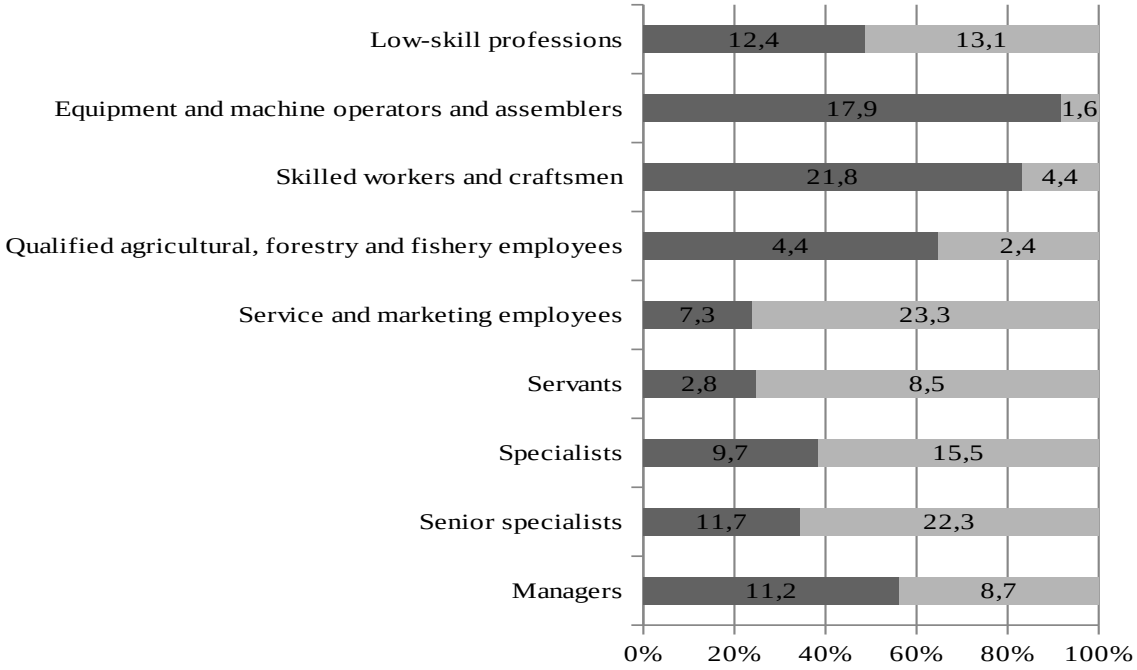

Fig.1. Percentage distribution of employees by profession and gender in Latvia in 2014.
Source: csb.gov.lv (Nodarbinātie pa vecuma..., 2014).

Foreign scientists research the choice of a profession based on gender by employing the gender conformity approach in career education. The principle of gender conformity is described in detail in communication theories. Communication skills relate to every individual's individual career, too, and are an important indicator of social competences, which are appreciated by the whole society, for every specialist, as the inability to be a good communication partner is often an obstacle to an individual's career growth.

The issues on differences in communication between opposite genders have become urgent owing to both globalisation and the feminist movement, and the feminist movement in industrially developed countries has at last a 150-year long history. Gender communication theories (Tannen, 1990, 1992, Kramarae, 1996, Benhabib, 1992) explain and help reassess the unreasonable stereotypes, established in societies, on the roles and functions of genders. Our stereotypes on femininity and masculinity influence communication both in the family, at the job and in the community; accordingly, the communication theories that explain differences in communication between women and men can be very useful in understanding how to make successful careers. The phrase glass ceiling is used to refer to women's careers and their development and constraints. In government policy documents, the phrase glass ceiling is referred to as the term vertical labour market segregation – the tendency of men and women to take different job positions in the same profession or profession group (Ķīkule, 2006).

In her research studies, Johanne Toussaint mentions that the glass ceiling refers to an invisible barrier that prevents minorities and women from moving up the career ladder regardless of their qualification or achievements. Initially, the metaphor was applicable to barriers particularly in women's careers, but soon it was extended to refer to the obstacles preventing men of minorities, as well as women, from progress. The phrase glass ceiling refers to an invisible barrier that does not allow women to do success in their careers. This metaphor is most often used with regard to women who are not able to move up the career ladder at their job. The metaphor glass ceiling is an excellent way how to describe a situation that prevents women from reaching the heights of career, compared with men. Theoretically, nothing obstructs women to pursue an ascending career; a barrier is put by stereotypes. For this reason, this ceiling is referred to as a glass ceiling. A woman can clearly see that those who are ahead of her are much stronger and cannot achieve the same results; she is stopped by invisible forces that do not allow her grow further (Napikoski, 2014).

The glass ceiling involves barriers for vertical growth in careers, unequal wages paid for the same work and the loss of professionalism during the maternity leave.

David A. Cotter defined four distinctive features or criteria – if they are met, one can conclude that the glass ceiling is present. The glass ceiling takes the form of inequality if the following phenomena are present:

- a gender or racial difference that is not be explained by other job-relevant characteristics of the employee;
- a gender or racial difference that is greater at higher levels of an outcome than at lower levels of an outcome;
- a gender or racial inequality in the chances of advancement into higher levels, not merely the proportions of each gender or race currently at those higher levels;
- a gender or racial inequality that increase over the course of a career (Cotter, Hermsen, 2001).

One can distinguish the following barriers:

- social barriers that manifest as conscious and unconscious stereotypes and prejudices concerning gender and ethnicity;
- internal activity barriers; obstacles related to entrepreneurship are as follows:
    - submission of information (job advertisements etc.) and hiring practices that do not result in hiring women;
    - dominant culture (e.g. a white man), which isolates women in such a corporative climate;
    - lack of mentoring in management training;
    - insufficient opportunities for a career adapted for training and rotation at the job;
    - specific or different standards to evaluate performance;

    - biased evaluations and control systems;
    - limited availability or unavailability of informal network communication;
    - unproductive behaviour and the harassment of colleagues.
- governmental barriers are as follows:
    - lack of control and consistent legal protection;
    - imperfections in the collection of data on employment; it is difficult to identify the status of social groups at national level;
    - inadequate reporting and dissemination of information concerning the glass ceiling;
- other barriers:
    - different wages for the same work;
    - sexual, ethnic, racial and religious discrimination or harassment at the job;
    - lack of government policies for family-friendly jobs (policies discriminating homosexuals, aliens, elderly or lonely individuals);
    - exclusion from informal networks;
- stereotypes and prejudices on the role and abilities of women (Cotter, Hermsen, 2001).

Discrimination at the job usually takes place because of several essential factors: age, gender, nationality; therefore, it is difficult to distinguish the discrimination oriented towards an employee just because the employee is a man or a woman. The fact of discrimination is not always obvious and may be identified directly, it can be indirect – a seemingly neutral event, criterion or practice that create or can create negative consequences for individuals of the same gender (Ķīkule, 2006).
In Latvia, the legislation stipulates the equal treatment of men and women and bans any kind of discrimination. Such rights are guaranteed both by the Constitution of the Republic of Latvia and by labour laws. Equal wages, working conditions as well as equal treatment during the entire period of employment, including promotion in the job, professional training as well as termination of the labour relationship are set from the very beginning of establishing relationships with potential employees when the first contact is made during a job interview and when a labour relationship is established through concluding a labour contract.

The labour law provides that in case an employer has violated the ban on different treatment, the employee involved has the right to demand an adequate compensation that is set by a court based on its considerations. The labour law prohibits differential treatment based on race, skin colour, age, disability, religious, political or other conviction, national or social origin and property or marital status of an employee (Darba likums, 2001).

At the European Union level, the principle of equal treatment concerning promotion in the job is regulated by a Directive adopted in 1976 (No 76/207/EEC) and amended in 2002 (No 2002/73/EC) (76/207/EEC, 1976, 2002/73/EC, 2002) (Eiropas Padomes…, 1976).

In Latvia, it is not possible to identify the administrative level having this invisible and insuperable barrier for women, yet, the Free Trade Union Confederation of Latvia (LBAS) admits that this glass ceiling exists in Latvia as well (Ķīkule, 2006).

According to LBAS data, such a barrier is most often present in large enterprises, organisations with bureaucratic structures and institutions involved in making policies. For instance, in the Free Trade Union Confederation of Latvia (it unites Latvia's employers employing more than 50 employees, producer associations of important economic sectors and regional associations and federations), which actively advocates the elimination of gender discrimination and the observance of gender equality principle in practice, there is only one woman among 14 members of its Council and also one woman among its seven vice-presidents. The mentioned fact fully reflects the situation – mainly men represent the governing bodies of the large enterprises and producer associations in Latvia (Ķīkule, 2006).

It is difficult to regulate the glass ceiling phenomenon by means of the legislation, as it is, to a great extent, associated with the public's understanding, stereotypes and gender roles. Because of stereotypes on women who, due to various reasons, for instance, are not able to cope with large stress, make emotion-based decisions and spent a lot of time on their children, the management of a company is entrusted to a man; in this case, it is likely a woman will have to prove that the mentioned stereotypes are not attributed to her and she is an equal candidate. Men may not be blamed for glass

ceiling situations, as women often believe that high-rank job positions may be held only by men, women lose a lot of their femininity if holding a leading job position and that men are smarter and better managers.

Differences in gender communication

There are several communication theories:

- *Gender communication styles* (Tannen, 1990, 1992). The purpose of the theory is to acknowledge and evaluate communication styles with the opposite gender and to achieve mutual respect and understanding. The theory emphasises that particularly the communication differences lead to misunderstandings and ambiguities. The communication styles of men and women are not only two different kinds of communication – they are two different cultural dialects. As regards communication differences in a team, cooperation and conversation is important for women and the change of rules of game does not create any problems. Women use a conversation to express their interest in other individuals and their needs in order to cooperate. Women use a conversation as a tool to generate ideas, solve problems and establish relationships. The process of a conversation itself is important for women. The world perspective of women is based on care and responsibility. Communication between women and men is characterised by different communication norms and different communication usage principles, and these differences can hamper mutual understanding.

  There are words in any language that may be often attributed to women's domains of activity (sewing, housekeeping, cooking and bringing up children). In a conversation, women are characterised by cheerful voice intonations and by asking questions requiring confirmation (is not it? Yes?), emphases (e.g., such, much) and very polite constructions of sentence (e.g., would you, please, close the door). Differences may be also observed in the skill to listen, in the usage of paralanguage and in providing feedback. Women, during a conversation, can stay within the same conversation topic for a long time.

  The theory on gender communication styles reveals that men and women, unconsciously, communicate in different ways. This theory contributes to mutual respect and understanding, pointing that the style of communication between both genders has to be appreciated and respected. The theory contributes to communication competences, as we have to understand and appreciate the communication of both genders because it can become more effective and appropriate, and we have to learn to adapt to the styles of both genders.
- *Muted Group Theory* (Ardener, Kramarae, 2014). This theory states that individuals with smaller influence are difficult to perceive by others (cooperation partners, managers and subordinates); consequently, they are forgotten, their ideas and activity are silenced and they are made unobvious. The theory revealed why some social groups are excluded from communication:
  - owing to gender;
  - men are more active than women;
  - muted status is perceived as a lower status in society.
- Men and women perceive the world differently, as they have different perception formation experience, as well as men and women have different experience in performing various tasks in society. However, women have a possibility to transform their unique ideas, experience and role in men's language to be heard (Ardener, Kramarae, 2014).

  The theory explains how women perceive the world and how the world perceives women, and why some groups in society are muted or not listened to. Men and women perceive the world differently, as they have different experience in playing different roles in society. In society, the perception of women is regarded as less competent and less effective. Women should transform their ideas and experience in men's language in order to be listened to. It is important that women and men become equal partners in terms of formation and usage of their language. If their languages become equal, their power will also equalise.
- *Interactive Universalism Theory* (Benhabib, 1992). The theory offers a new communication ethic based on the concept of universal interaction among individuals. S.Benhabib's purpose was to extend the social norms so that they fit everyone. Communicative ethics mean that all people are

responsible for the voices that are not heard and have to understand the silenced voices. From the feministic perspective, S.Benhabib believes that a woman's ego may not be divided into a public and a private ego. Women cannot often afford to be autonomous due to their maternity status. The author of the theory demands respect against everyone and pursue possibilities for discussion on any matter.

- *Standpoint Theory* (Communication Theories in Practice. Standpoint Theory, 2014). The theory views the world from a very feministic perspective. The theory's developers and researchers are Sandra Harding and Julia T. Wood who assert that through conducting a perspective examination of women we can get a new perspective on key problems. The best example is a research study carried out to reveal the way the world functions from the perspectives of women and other social groups being excluded from society. This would give us women's opinions, and a situation analysis would be unbiased. The theory explains that people are present at various locations and different times, their opinions are different and, consequently, their perspectives on the future in the world are diverse. According to the theory, opinions are diverse due to different genders, races, sexual orientations and, accordingly, there are different development perspectives. Women in various countries (especially in the USA) face much more unjust situations owing to the gender. For instance, they often face prejudices at the job, as there are stereotypes that women are emotional and cannot adequately react on stressful situations at the job. The same relates to violence against women – rapes and sexual violence; as a result, they are even afraid to leave their home in their daily life. Standpoint Theory shows that there has to be a possibility to see the world from the perspective of excluded social groups in order to reveal and understand how the world functions (Communication Theories…, 2014).

The issues on differences in the perception and communication of women and men are very urgent nowadays. Due to these differences and due to the misunderstanding of these differences, a lot of conflicts in families and at the job arise. Already in the 1980's, K. Gilligan (1982) researched women's psychological development, concluding that a woman in her nature was mainly tended towards a relationship, whereas a man tended towards independence. According to E.Liebert (Liebert, 2000), gender inequality begins early in the childhood when a child, being brought up in a family, learns various roles and values. The child identifies him/herself with the parents, copies their behaviour and relationship patterns. The child learns that girls have to play with dolls, whereas boys have to do it with machines and weapons. Later on, the culture and society present us examples of ideal women and ideal men, thus drawing the boundaries. N. Slee (2003) emphasises the influence of androcentrism on the choice of a profession, saying that women's talents and endowments are often refused owing to their family duties (Slee, 2003). The self-confidence of women is often linked to the body's size, their slimness or corpulence, sexual attractiveness, hair and skin colours and virginity (Stevenson-Moessner, 2000).

A survey of practising career consultants was conducted from December 2014 to January 2015 in order to gain insight into the principle of gender conformity in women's careers. The survey involved 48 career consultants. The respondents were given statements from communication theories on the communication of women and the key stereotypes on women's careers in Latvia (Table 1).

Table 1

Respondents' opinions on the influence of gender conformity principles on women's careers

No	Do you agree with the assertions that in Latvia	Yes	No
1	the "glass ceiling" is present in women's careers	27.1	72.9
2	there are stereotypes on women's and men's professions	79.2	20.8
3	equal wages are paid for the same work regardless of gender	43.8	56.3

No	Do you agree with the assertions that in Latvia	Yes	No
4	for women, communication in a team is different (according to D.Tannen (1992))	79.20	20.8
5	during the course of conversation, women easily change the rules of game (according to D.Tannen (1992))	50.0	50.0
6	for women, cooperation and the course of a conversation itself are important ((according to D.Tannen (1992))	83.3	16.7
7	in order to cooperate, women use conversation to express their interest in other individuals and their needs (according to Tannen) (according to D.Tannen (1992))	85.4	14.6
8	women's world perception is based on care and responsibility (according to D.Tannen (1992))	72.9	27.1
9	communication between men and women is characterised by the communication norms and different language usage principles, and these differences can obstruct their understandings ((according to D.Tannen (1992))	60.4	39.6
10	in a conversation, women are characterised by cheerful voice intonations and by asking questions requiring confirmation (is not it? Yes?), emphases (e.g., such, much) and very polite constructions of sentence (e.g., would you, please, close the door) (according to D.Tannen (1992))	75.0	25.0
11	during a conversation, women can stay within the same conversation topic for a long time (according to D.Tannen (1992))	45.8	54.2
12	women being quiet are excluded from communication at their job and their career growth opportunities in their team are limited (according to K. Kramarae (1996))	72.9	27.1
13	women having a family and children have limited choices of a career (according to K. Kramarae (1996))	47.9	52.1
14	women are "emotional" and cannot adequately act in a stressful situation at their job (according to S. Benhabib (1992))	18.8	81.3

Table 1 shows that the majority of the career consultants questioned agreed to the following statements:

- women use conversation to express their interest in other individuals and their needs in order to cooperate (85.4%);
- for women, cooperation and the course of a conversation itself are important (83.3%);
- for women, communication in a team is different (79.2%);
- there are stereotypes on women's and men's professions (79.2%);
- women's world perception is based on care and responsibility (72.9%).

The career consultants did not agree to the following statements:

- women are "emotional" and cannot adequately act in a stressful situation at their job (81.3%);
- the "glass ceiling" is present in women's careers (72.9%);
- equal wages are paid for the same work regardless of gender (66.3%).
- The respondents' statements:
- women are overworked more than men;
- women's careers depend on the profession chosen, the place of work and their features of character;
- when answering these questions, three various/different types of women were standing in front of me, and each of them would likely have other answers. A woman working in a publicly popular sector – she is obstructed by neither her family status, nor her children, nor her emotionality. A woman applying for a high-rank job position but having no connections would be discriminated owing to both the age of her children, her emotionality and her mental

instability in stressful situations. The charm of femininity (in this case I do not mean external appearance because it may be bought and is unimportant) of a woman holding a high-rank job position for some period changes. She becomes masculine no matter whether she wants it or not and is aware of it or not;

- essential roles are played by the situation, the age of a woman, her education level, the sector she works in and other factors;
- women's communication is abundant, they are emotionally intelligent, whereas men's communication is business like, their expressions are specific and concise;
- the public's stereotypes are deeply rooted and influence the development of women's careers; there are stereotypes on women's and men's jobs. Men gradually disappear from the pedagogue profession, which might cause negative consequences in the future;
- the key value is family; therefore, a woman is mainly seen as a mother;
- differences have to be seen in biological, social and psychological contexts rather than in the context of genders. Women's communication and perception of life depend on their traits of character, temperament, specifics of higher nervous activity, mental sentiment and competences;
- differences between women and men (not only physically but also psychologically) are likely to be determined by nature;
- women and men differ purely psychologically – in their way of thinking, emotions etc.;
- gender differences exist between men and women, yet, these differences do not considerably influence the execution of work. Gender discrimination is present at the job in Latvia; men more often hold higher-rank job positions and are paid higher wages;
- nowadays, women are quite self-sufficient, confident, motivated and knowledgeable and can work (manage) just as well as men. Fortitude and decisiveness and sometimes empathy and flexibility are characteristic of women;
- I believe that in our society a woman is able to make her own career; it depends on her motivation and education;
- it is still difficult for a woman to find a job;
- it is difficult to build up a career in small towns, and some connections are necessary.

Conclusions

The author concludes that gender differences exist, and it influences women's careers because:

- gender differences are still present in the labour market, and women are still more represented in low-wage industries, whereas in job positions that involve decision-making women are represented insufficiently;
- at the European Union level, the greatest difference between men and women was observed in the domain of power, with the gender equality score standing at only 38. This was the only domain in which Latvia's score was higher than the EU average, reaching 38.6 (Estonia had 27.5 and Lithuania had 32.1);
- the traditional choice of an education and career based on gender is one of the most significant factors for segregation in the labour market by gender and, accordingly, for differences in wages between men and women, for an inelastic labour force, etc.;
- the objective of gender equality policies in Latvia is to reduce the visible and invisible obstacles that prevent women and men from choosing a non-traditional education and profession for their gender;
- fortunately, a positive trend towards women's equality might be observed in the labour market over recent years. So it can be concluded that the principle of gender conformity is observed.

Scientists research the choice of a profession based on gender by employing the gender equality approach in career education. The principle of gender conformity is described in detail in communication theories (the Glass Ceiling refers to an invisible barrier, different gender communication styles, Muted Group Theory, Interactive Universalism Theory, Standpoint Theory). Communication skills relate to every individual's individual career. These communication theories

explain and help reassess the unreasonable stereotypes, established in societies, on the roles and functions of genders.

According to the author, the principle of gender conformity includes the following aspects:

- economic independence;
- equal wages for the same work;
- the glass ceiling on the way to a higher-rank job position;
- it is still more difficult for women to find a job;
- stereotypes on women who, due to various reasons, for instance, are not able to cope with large stress, make emotion-based decisions and spent a lot of time on their children, the management of a company is entrusted to a man; in this case, it is likely a woman will have to prove that the mentioned stereotypes are not attributed to her and she is an equal candidate.

Communication differences of women:

- nowadays, women are quite self-sufficient, confident, motivated and knowledgeable and can work (manage) just as well as men;
- fortitude and decisiveness and sometimes empathy and flexibility are characteristic of women;
- women's communication and perception of life depend on their traits of character, temperament, specifics of higher nervous activity and mental sentiment;
- women's communication is abundant, they are emotionally intelligent, whereas men's communication is business like, their expressions are specific and concise.

The career consultants questioned in the survey agreed to the following statements: women use conversation to express their interest in other individuals and their needs in order to cooperate (85.4%), for women, cooperation and the course of conversation itself are important (83.3%), for women, communication in a team is different (79.2%), there are stereotypes on women's and men's professions (79.2%) and women's world perception is based on care and responsibility (72.9%).

In contrast, negative answers were given on the following assertions: women are "emotional" and cannot adequately act in a stressful situation at their job (81.3%), the "glass ceiling" is present in women's careers (72.9%) and equal wages are paid for the same work regardless of gender (66.3%).

After analysing the data, the author concluded that even though gender equality theoretically existed in Latvia, there were still some stereotypes on men's and women's professions; the glass ceiling was not a widespread phenomenon, while in some kinds of jobs it might be observed, and the reality in Latvia was in line with the gender communication theory and communication differences might be observed for women in a team. Nevertheless, research on this domain has to be continued.

Bibliography

1. Andrade S. (2011). *Is Glass Ceiling for Women a Myth?*. [online] [29.01.2015]. Available at https://saharconsulting.wordpress.com/2011/02/25/is-glass-ceiling-for-women-a-myth/
2. Ardener E., Kramarae C. (2014). Muted Group Theory. Portal: EDUC5102 [online] [29.01.2015]. Available at http://educ5102.wikispaces.com/Muted+Group+Theory+%28Ardener+%26+Kramarae%29
3. Astin H. S. (1984). The meaning of work in women's lives: A Sociopsychological Model of Career Choice and Work Behavior. *The Counseling Psychologist*, 12 (4), 117–126.
4. Benhabib S. (1992). *Situating the Self Gender, Community and Postmodernism in Contemporary Ethics.* New York: Routledge, USA.
5. Cotter D.A., .Hermsen I.M., Ovadia S., Vanneman R. (2001). *The Glass Ceiling Effect* [online] [29.01.2015]. Available at http://www.bsos.umd.edu/socy/vanneman/papers/CotterHOV01.pdf
6. Communication Theories in Practice. Standpoint Theory. (2014). *Wake Forest University.* Blog. [online] [29.01.2015]. Available at http://cloud.lib.wfu.edu/blog/com100spring2014/2014/04/29/standpoint-theory-of-sandra-harding-and-julia-t-wood/
7. *Darba likums* (2001). (Labour Law). [online] [29.01.2015]. Available at http://likumi.lv/ta/id/26019-darba-likums (In Latvian)

8. *Eiropa 2020. Stratēģija gudrai, ilgspējīgai un integrējošai izaugsmei* (2010). (EUROPE 2020 A strategy for smart, sustainable and inclusive growth). EK paziņojums (Statement of European Commission). [online] [29.01.2015]. Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:LV:PDF (In Latvian)
9. *Eiropas Padomes Direktīva* (1976). Par tāda principa īstenošanu, kas paredz vienlīdzīgu attieksmi pret vīriešiem un sievietēm attiecībā uz darba, profesionālās izglītības un izaugsmes iespējām un darba apstākļiem. (Council Directive of 9 February 1976 on the implementation of the principle of equal treatment for men' and women as regards access to employment, vocational training and promotion, and working conditions). (Nr.76/207/EEK (1976), [online] [29.01.2015]. Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31976L0207:LV:HTML (In Latvian)
10. *Eiropas Parlamenta un Padomes Direktīva* 2002/73/EK (2002), ar kuru groza Padomes Direktīvu 76/207/EEK par tāda principa īstenošanu, kas paredz vienlīdzīgu attieksmi pret vīriešiem un sievietēm attiecībā uz darba iespējām, profesionālo izglītību un paaugstināšanu amatā, kā arī darba nosacījumiem. (Directive 2002/73/EC of the European Parliament and of the Council of 23 September 2002 amending Council Directive 76/207/EEC on the implementation of the principle of equal treatment for men and women as regards access to employment, vocational training and promotion, and working conditions). Dokuments attiecas uz EEZ. [online] [29.01.2015]. Available at http://eur-lex.europa.eu/legal-content/LV/TXT/?uri=CELEX:32002L0073 (In Latvian)
11. *Gender Equality in the European Union* (2011). [online] [29.01.2015]. Available at http://ec.europa.eu/justice/gender-equality/files/brochure_equality_en.pdf
12. *Gender Equality Index area* (2013). European Institute for Gender Equality. [online] [29.01.2015]. Available at http://eige.europa.eu/sites/default/files/News/EIGE-press-release-Gender-Equality-Index.pdf,
13. *Gender Equality Index in Latvia* (2013). European Institute for Gender Equality. [online] [29.01.2015]. Available at http://eige.europa.eu/content/gender-equality-index#/?country=LV
14. Gilligan C. (1982). *In a Different Voice: Psychological Theory and Women's Development*. Cambridge, Massachusetts, Harward University Press, USA.
15. Kramarae C. (1996). Classified information: Race, class, and (always) gender. In J. Wood (Ed.), Gendered relationships, Mountain View, CA, Mayfield, USA, pp. 20.H38
16. Kasl C. D. (1989). *Women, sex, and addiction*. NY, Harper and Row Publishers, USA.
17. *Konsolidēts EK dibināšanas līgums un Nicas līgums* (2001). (Consolidation of the EC Treaty and the Treaty of Nice). [online] [29.01.2015]. Available at http://www.vvc.gov.lv/export/sites/default/LV/publikacijas/konsolidetsekligums-17.pdf (In Latvian)
18. Ķīkule I. (2006). *Rokasgrāmata arodbiedrību speciālistiem "Vai dzimumam ir nozīme, aizstāvot savas tiesības darba tirgū?"* (Handbook for trade union experts "Does gender play a role in defending their rights in the labour market?") [online] [29.01.2015]. Available at http://www.lbas.lv/upload/stuff/201004/dzimumvienl_7.pdf (In Latvian)
19. Napikoski L. (2014). What Is the Glass Ceiling for Women? [online] [29.01.2015]. Available at http://womenshistory.about.com/od/feminism/a/glass_ceiling_women.htm
20. *Nodarbinātie pa vecuma grupām un pēc dzimuma* (2014). (Employed by age group and by sex). Centrālā statistikas pārvalde. (Central Statistical Board) NBG07. [online] [29.01.2015]. Available at http://data.csb.gov.lv/pxweb/lv/Sociala/Sociala__ikgad__nodarb/?tablelist=true&rxid=cdcb978c-22b0-416a-aacc-aa650d3e2ce0 (In Latvian)
21. *Nodarbinātie pēc saimnieciskās darbības veida un dzimuma* (2009-2013). (Employed by economic activity and sex). Centrālā statistikas pārvalde. (Central Statistical Board) NBG081. [online] [29.01.2015]. Available at http://data.csb.gov.lv/pxweb/lv/Sociala/Sociala__ikgad__nodarb/?tablelist=true&rxid=cdcb978c-22b0-416a-aacc-aa650d3e2ce0 (In Latvian)
22. Liebert E. (2000). Seasons and Stages: Models and Metaphors of Human Development. In In Her Own Time: *Women and Developmental Issues in Pastoral Care*, ed. J. Stevenson-Moessner. Minneapolis, Fortress Press, USA, pp. 19–45.

23. *Plāns dzimumu līdztiesības īstenošanai 2012.–2014.gadam* (2012). (Plan for Gender Equality 2012 to 2014). Ministru kabineta 2012.gada 17.janvāra, rīkojums Nr. 35. (Order of Cabinet of Ministers Nr. 35 from 17.01.2012). [online] [29.01.2015]. Available at polsis.mk.gov.lv/LoadAtt/file62154.doc (In Latvian)
24. Slee N. (2003). *Faith and Feminism: An Introduction to Christian Feminist Theology*. London, Darton, Longman and Todd, UK.
25. Stevenson-Moessner J. (2000). Interactional Theology. Restructuring Developmental Theory. In: In Her Own Time*: Women and Developmental Issues in Pastoral Care*, ed. J. Stevenson-Moessner. Minneapolis: Fortress Press, USA, pp. 7–19.
26. *Strategy for equality between women and men 2010-2015* (2010). [online] [29.01.2015]. Available at http://ec.europa.eu/justice/gender-equality/files/strategy_equality_women_men_en.pdf
27. Tannen D. (1990). You Just Don't Understand: Women and Men in Conversation. [online] [29.01.2015]. Available at http://occupytampa.org/files/tristan/fem/books/Deborah_Tannen-You_Just_Don_t_Understand_Women-Bookos.org-.pdf
28. Tannen D. (1992). That's not what I meant! [online] [29.01.2015]. Available at http://occupytampa.org/files/wcom/tannen/Deborah%20Tannen-That%27s%20Not%20What%20I%20Meant!_%20How%20Conversational%20Style%20Makes%20or%20Breaks%20Your%20Relations%20with%20Others-Virago%20Press%20Ltd%20%281992%29.pdf

Career Management: Towards Constructivist Model

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Abstract: Topicality of the theoretical foundation of career management is determined by the lack of a theoretically substantiated career management model and its practical need for successful contemporary career guidance. The object of the research is an individual career as a meaningful life activity. The subject of the research is career management as a specific form of the activity performed by an individual. The aim of the research is to substantiate a career management model viable in our contemporary society. To achieve the aim concepts of action, learning, competence, career, employability, human capital, mental models, career management and project management were briefly described and analyzed. Contemporary definitions of the terms "career" and "career management" were proposed in the article. The results were presented in the career management model using constructivist approach developed by the author.

Keywords: constructivist approach, employability, human capital, career, career management.

Introduction

Topicality of the theoretical foundation of career management is determined by the lack of a theoretically substantiated model of career management and its practical need for career guidance.

Career theories developed in modern societies were based on the positivistic worldview conceptualizing career as a fixed sequence of unified stages (Super, Super, 1996; Levinson, 1986; Sullivan, 1999) and were built on assumptions of bounded, stable organizations and stability of personal characteristics. In industrial societies career was associated more often with continuous full-time employment in one or several hierarchical, bureaucratic organizations (Haase, 2007), and could be described as a movement in hierarchically structured social space (Сорокин, 1992).

Organizations in postmodern societies are rapidly changing, therefore no matter how stable individual characteristics might be, the need for new theoretical models becomes a matter-of-course. New models have to include concepts of individual and organizational flexibility, personal adaptability and resilience, and they have to put emphasis on life-long learning (Savickas, Nota, 2009). Moreover, unstable and *turbulent career environments require* of individuals *to continually manage changes in themselves and in their contexts* (Fugate, Kinicki, 2004, 15); individuals are encouraged to manage their careers (Savickas, 2011). Recent career theories rooted in the constructivist approach put emphasis on the contexts and cultural diversities and recognize an individual as a designer, constructor and manager of his/her life and career (Guichard, 2009, Savickas, Nota, 2009).

Therefore, the object of the research is an individual career as a meaningful life activity in rapidly changing organizations, economics and societies. The subject of the research is career management as a specific activity carried out by an individual. The aim of the research is to substantiate a career management model viable in our contemporary society. To achieve the aim, several tasks were formulated, the most important ones were as follows: to study the theoretical basis of the career management concept; to identify and analyze characteristics of human activity; to define the concepts "career" and "career management" in rapidly changing societies, as well as to construct an appropriate career management model based on the findings of the research.

The aim of this article is to examine several theories and concepts, to describe career management in contemporary society, as well as to propose an appropriate theoretically well-substantiated career management model.

Methodology

To achieve the aim of the article concepts of action, learning, competence, career, employability, human capital, mental models, career management and project management were briefly described and analyzed. Afterwards career management model using constructivist approach were developed by the author. General scientific methods such as analysis and synthesis, induction, deduction, and analogy were used in the research.

Results and Discussion

We are living in the *era of global business turbulence* (Hall, Chandler, 2007) where the change is the *greatest constant* (Sterman, 1994, 292), and the high level of personal adaptability (*willingness and ability to change personal factors* – knowledge, skills, abilities, dispositions, and other characteristics *to meet the demands of the situation* (Fugate, Kinicki, 2004, 17)) is the most important prerequisite for living in pace with the rapidly changing conditions. Every new situation in life is at least slightly different from the previous one, and individuals constantly have to acquire new knowledge to find the best solutions. Actualization and realization of individual's potential (Rogers, 1959; Maddi, 1968; Bronfenbrenner, Morris, 2006) are inextricably linked to its simultaneous development. In such conditions every situation of individual's life is a situation where new knowledge and skills can be acquired, i.e., situated learning takes place. Learning *occurs through personal reflection, reconstruction and social interaction* and takes place in formal as well as in non-formal or informal settings and is defined as a process *by which an individual assimilates information, ideas and values and thus acquires knowledge, know-how, skills and/or competences* (Cedefop, 2011, 99).

Learning is feedback process (Sterman, 1994, 293). Individuals compare information about the state of the real world and their desires, perceive incongruence between the actual and desired states and take all necessary steps to cause the real world to move towards the desired state. More often desired state is reached through subsequent choices and decisions revised on the basis of feedback received. Feedback (*all forms of quantitative and qualitative information from the real world* (Sterman, 1994, 293)) can cause changes not only in decisions and strategies, (single-loop and double-loop learning (Argyris, 2006)), but also involves modification of the underlying structures (triple-loop learning (Sandars, 2006)), i.e., mental models – *deeply ingrained assumptions, generalizations, or even pictures or images that influence how* individuals *understand the world and how* they *take action* (Senge, 2006, 8). Such transformative learning (Sandars, 2006) involves new articulations of understandings, leads to reframing of a situation, and promotes development of new goals, strategies and decision rules (Sterman, 1994).

In rapidly changing conditions effective tools for creating, selecting, processing and using the appropriate knowledge to solve problems in all domains of life are required more than fixed knowledge. Therefore, competence (*proven ability to use knowledge, skills and personal, social and/or methodological abilities in work or study situations and in professional and personal development* (Cedefop, 2011, 35-36)) is considered as the most important learning objective.

Competence as a problem-solving potential includes functional (knowledge, skills and abilities necessary for the design and implementation of the appropriate role- and context-specific action), motivational (needs, motives, goals, values, meanings) and reflectional (the ability to reflect on performance, experience, values, knowledge and other resources at different points in time; reflection on the happened (reflection-on-action), ongoing (reflection-in-action) and future activities (reflection-for-action)) components (Argyris, 2006; Schön, 1987; Killion, Todnem, 1991; Cheetham, Chivers, 2005; Каменская, 2009; Mulder, 2011). Competence is *concretized at the moment knowledge is applied* (Reinhardt, North, 2003, 1374) and simultaneously is an outcome of previous learning and a prerequisite for the further development (Bronfenbrenner, Morris, 2006).

To be competent means to show initiative and willingness to adequately handle complex, unpredictable and unprecedented situations; to implement role- and context-specified activities responsibly and ethically based on the mobilization and combination of personal (knowledge, skills, attitudes, experiences, emotions, values and motivation) and external resources to achieve the desired results (e.g., to meet the complex requirements in the particular context (Salganik, Provasnik, 2009));

to cooperate with others and to be able to attract scarce resources; and to learn from the activities carried out (Le Boterf, 2008; 2010). Competence results *in an effective and/or superior performance* (Boyatzis, 1982, 20).

It is evident from the above that career management has to be based on the usage and development of individual's career management competence; career management performance is an expression of career management competence, while the process of career management is the process of career management competence development. Therefore, a career management model also has to be made of the functional, motivational and reflectional components, it has to reflect transformative single-loop, double-loop (reflexive) and triple-loop learning (Argyris, 2006; Sandars, 2006), it has to include processes of personal reflection, reconstruction and social interaction, as well as describe a design and implementation of certain activities. Career management competence can be described as the ability to show initiative and willingness to adequately, responsibly and ethically handle career situations; to mobilize and combine personal and external resources and to use them in the implementation of appropriate activities to achieve the desired results; to cooperate with others and to be able to attract scarce resources; and to learn from experience. Career management competence results in effective and/or superior performance of career management which leads to a successful career.

Nowadays a term "career" is defined more often as *a sequence of job opportunities that goes beyond the boundaries of any single employment setting* (DeFillippi, Arthur, 1996, 116) or broader - as *the totality of work - paid and unpaid - one does in his/her lifetime* (Sears, 1982, 138), the broadest definitions consider career as *life roles at home and in the community, leisure activities, learning and work* (Career Education ..., 2009, 6) or as *interaction* of education, work and privacy (Izglītības likums, 1998). It is argued that everyone regardless of his/her age, gender and employment has a career (Career Education ..., 2009).

Such large concepts are hard to operationalize and measure, as the definitions of life and career become indistinguishable. However, they are not identical; *career is concerned with the productive side of life* (Cochran, 1994, 205). Career has past (available through the memory), present (a composition of meaning that has been lived, is being lived, and will be lived) and future (available from anticipation and imagination) and involves personal representations used in the interpretation and evaluation of the current actions (Cochran, 1994).

During the last century, a notion of career was associated more often with continuous full-time employment. Researchers *must now focus attention on employability rather than employment*; in rapidly changing labour markets *individuals cannot maintain their employment, so they must maintain their employability and actively manage their careers* (Savickas, 2011, 251, 253). Employability is a *synergistic combination of career identity, personal adaptability* (described above), *and social and human capital* (Fugate, Kinicki, 2004, 18), which *enable individuals to (...) progress during their careers* (Cedefop, 2011, 52).

A term "career identity" is defined as individual's *self-definition in the career context, describing "who I am" or "who I want to be"* (Fugate, Kinicki, 2004, 18), more or less coherent cognitive-affective representations of diverse and diffuse career experiences and aspirations, assimilated into meaningful or useful structures. Career identity *may include goals, hopes, and fears; personality traits; values, beliefs, and norms; interaction styles; time horizons; and so on*, and operate as a basis for making sense of past and present and giving a direction to future (Fugate, Kinicki, 2004, 20). Such an understanding of career identity puts an emphasis on the leading position of career identity in the synergistic combination of employability. Driven by aspirations, career identity acts as a *cognitive compass that motivates individual* to actively realize or create career opportunities (Fugate, Kinicki, 2004, 17). Therefore, career identity may be recognized as a mental model – individual *understanding of the causal structure of the* [career] *system, the boundary* individuals *draw around the system, the time horizon* they *consider relevant, or* their *goals and values* (Sterman, 1994, 294); career identity serves as an underlying structure for elaboration of career strategies and decisions (career designing), as well as is a basis for career interpretation and evaluation. Career identity is one of the self-constructed and continuously reconstructed *cognitive structures in long term memory* that allows individuals *to organize conceptions and construct themselves* (Guichard, 2006, 8).

Several researchers describe similar structures; personal career theory (Holland, 1997), subjective career (Savickas, 2002), working identities (Ibarra, 2003), subjective identity forms (Guichard, Pouyaud, 2012) are mentioned as the most important structures of career management. It could be concluded that the ability to design, implement, interpret and evaluate one's own career (briefly: to manage one's own career) depends on the quality of these structures and their usage. Career realization can be separated from career management; in some cases an individual may be only an *implementer* (not a *manager*) of his/her career. If his/her career management structures (e.g., career identity) are not sufficient for satisfactory independent career management (and consequently his/her career management competence is insufficient), he/she can fully or partially rely on external career management (career designing, interpretation and evaluation) provided by an employer, a parent, a peer or someone else.

Individuals and organizations *make investments in social and human capital* and *anticipate of future returns in the workplace* (Fugate, Kinicki, 2004, 23). A term "social capital" is defined as *the goodwill* (information and influence) *inherent in social networks*, which extends individual's ability to find, identify (or create) and realize career opportunities (Fugate, Kinicki, 2004, 24). Human capital represents individual's ability to meet the performance expectations in the labour market or in non-market activities (Laroche, Mérette, 1999; Fugate, Kinicki, 2004), and is defined *as the aggregation of the innate abilities and the knowledge and skills that individuals acquire and develop throughout their lifetime* (Laroche, Mérette, 1999, 89), and *use to produce goods, services or ideas in market or non-market circumstances* (Miller, 1996, 22). Human capital promotes *personal, social and economic wellbeing* (Cedefop, 2011, 82).

Anticipated return from human capital in the workplace or in non-market activities is obtainable only if human capital is used, so the contemporary career definitions have to be based on the notion of the usage of human capital. In continuously changing conditions the usage of human capital is inextricably linked to its simultaneous development. Career is also a learning activity resulting in enrichment of human potential over the lifetime (Peruniak, 2010, 8). Therefore, career can be broadly defined as the usage and development of human capital in the labour market or in non-market activities. The definition can be applied to all domains of life (such as leisure activities, learning and work) where human capital is used and developed in a wide range of roles at home and in the community. Personal adaptability, career identity and social capital are essential prerequisites for the usage and development of human capital, therefore, individuals can realize their careers *independently* but not in *isolation*; personal adaptability and social networking can not be realised and developed outside the society. The usage and development of human capital depend on individual's needs and motivation, values, interests and preferences, as well as is conditional upon opportunities offered by the society (Синицкая, 2006). Therefore, the society (social environment) has to be considered as a necessary prerequisite of career and has to be included in the contemporary model of career management.

Career as an action implicates goals, means, plans, and choices (Cochran, 1994). According to activity theory developed by Aleksei Leontiev (Леонтьев, 1975), the central level of the activity is constituted by hierarchically subordinated actions. Activities, excited by needs, *are driven by motives, are performed through certain actions which are directed at goals and which, in turn, are implemented through certain operations* (conscious or automatic actions, which do not have their own goals) (Kaptelinin, Kuutti, 1995, 193), particular activities-in-life are the units of the whole systemic life-activity (Карпинский, 2002). Dmitry Leontiev (2005, 63) argues that *intentional aspect of activity is determined by the meaning-based content that permeates to all levels of activity*; meaning-based structures of personality consist of motives, personal meanings, meaning-based sets, meaning-based constructs and dispositions, and personal values. It is evident from the above that career as a unit of life-activity is restricted by life-activity caused by personal needs, determined (facilitated or obstructed) by meaning-based structures of personality, directed at certain goals and can be carried out through specific intentionally chosen, planned actions and operations. According to the Life System Framework, an individual activity consists of *coherent "chunks" of context-specific, goal-directed activity (behaviour episodes)* (Patton, McMahon, 2014, 221).

A concept of career involves temporal organization; career is experienced over the extended period of time (Cochran, 1994). In rapidly changing conditions, a project is the most appropriate form of temporal organization of productive (non-replicative) activity (Новиков, 2010). A project is a *temporary endeavour undertaken to create unique product, service or result* (Harrington, McNellis, 2006, xxiv). It follows that career consists of the coherent relatively unrelated career projects. Unrelatedness is relative because every career project (a project of using and developing human capital) is implemented through competences created and developed during the previous career projects and at the same time facilitates development of the same competences. Relatively separated career projects are connected through competence development. As career is a unit of life-activity, career management must be subordinated to life management, inseparably linked to management of other life activities and can be understood as management of career projects.

According to H. James Harrington's project management definition (Harrington, McNellis, 2006, 1), career management can be defined as the application and development of career management competence for the usage and development of human capital in the labour market or in non-market activities *to meet or exceed stakeholder needs and expectations from a project*. Individuals and organizations which *make investments in human capital* and *anticipate of future returns in the workplace* (Fugate, Kinicki, 2004, 23) or in *non-market activities* (Laroche, Mérette, 1999) can be considered as stakeholders in the career projects; a notion of stakeholders has to include individuals (e.g., a career manager himself/herself, his/her peers or family members separately) as well as the small (e.g., family, peer groups) and large groups (e.g., organizations, communities) of society; successful career meets (or exceeds) not only the needs and expectations of an individual but also those of society from the individual's career projects. Moreover, career as a learning activity is based on feedback (Sterman, 1994). It could be concluded that the needs and expectations of society as well as its investments and support (e.g., feedback and guidance) given by individuals, groups and organizations have to be included in the career management model. At the same time, every individual as a member of society has his/her own needs and expectations related to careers of other individuals and can make investments in their human capital, give feedback to others and support them.

Based on the project concept proposed by Alexandr Novikov (Новиков, 2010), it can be seen that a career project consists of career designing, implementation and evaluation. Career designing should be considered as a part of life designing (Savickas, Nota, 2009). Life and/or career designing can include but is not limited to formulation of inconsistencies and problems, goal setting and selection of criteria, development and optimization of the models, selection of the most appropriate model for realization (decision-making), examination of the conditions and resources, developing of a strategy (plan) through decomposition and aggregation, as well as technological preparation for *implementation*. Career designing results in a career *strategy - perspective, direction, and guidelines on what to do and how to do it* (Shenhar, 2004, 572). *Evaluation* can be described as a reflection on the processes and results of life and/or career, result assessment (including feedback from society) and decision-making about the activity adjustment or launch of a new project. A career project as a learning activity consists of realization of the career strategies derived from the prevailed mental models, feedback on realization, and evaluation of the career project which *cause changes in* decisions, strategies and *mental models* (Sterman, 1994, 296).

The linear *Plan-and-Implement Model* and the cyclic *Test-and-Learn Model* are juxtaposed as two diametrically opposed models in the Working Identity conception developed by Herminia Ibarra (2003, 34). Taken separately, the models describe career changes only partly because career changes can be triggered by pains and problems, as well as by future possibilities, simultaneously a starting point may be either exterior or interior in both cases, etc. Therefore, it is evident from the above that an effective career management model can be created through synthesis of both models in an ongoing cyclical *Plan-and-Implement-and-Test-and-Learn* model. A career management process includes existent (problems, pain, and dissatisfaction) and prospective (future possibilities) triggers. The exterior and interior starting points (changes in the mind-sets as well as changes in actions; reflections, analysis and doing) may be linear with a fixed end goal within a single episode and at the same time a circular process in which *iterative rounds of action and reflection lead to updating goals and possibilities* (Ibarra, 2003, 34) within a wider time frame. Circular processes are based on the changing

end goals related to the ongoing improvement of the individual ability to formulate and test assumptions about the future possibilities. Therefore, career projects are deductive and inductive, explicit and implicit knowledge on personality and career which is applied and continuously created during the career projects.

Testing of the career models is an important part of career designing. Real-life activity is not the only way to test viability of the career models. Individuals also *can conduct experiments, and play* in virtual worlds, *low-cost laboratories* for controlled experimentation where actions can be carried out repeatedly in the same or different conditions. Virtual worlds *allow time and space to be compressed and dilated*, give an opportunity to stop the action to reflect, as well as allow to make decisions that are unsuitable (dangerous, infeasible, unethical) in the real world and to test possible consequences (Sterman, 1994, 309). Thus, it is evident from the said that career management *involves continuous experimentation in both the virtual world and real world*, receiving feedback from both, development of the mental models on the basis of interpretation and assessment of received information, and *design of experiments for the next iteration* (Sterman, 1994, 310). Career roles can be enacted in *fantasy,* communication (e.g., *in the counselling interview*) *or in real life activities, such as hobbies, classes, clubs, part-time work, and entry jobs* (Savickas, 2002, 156).

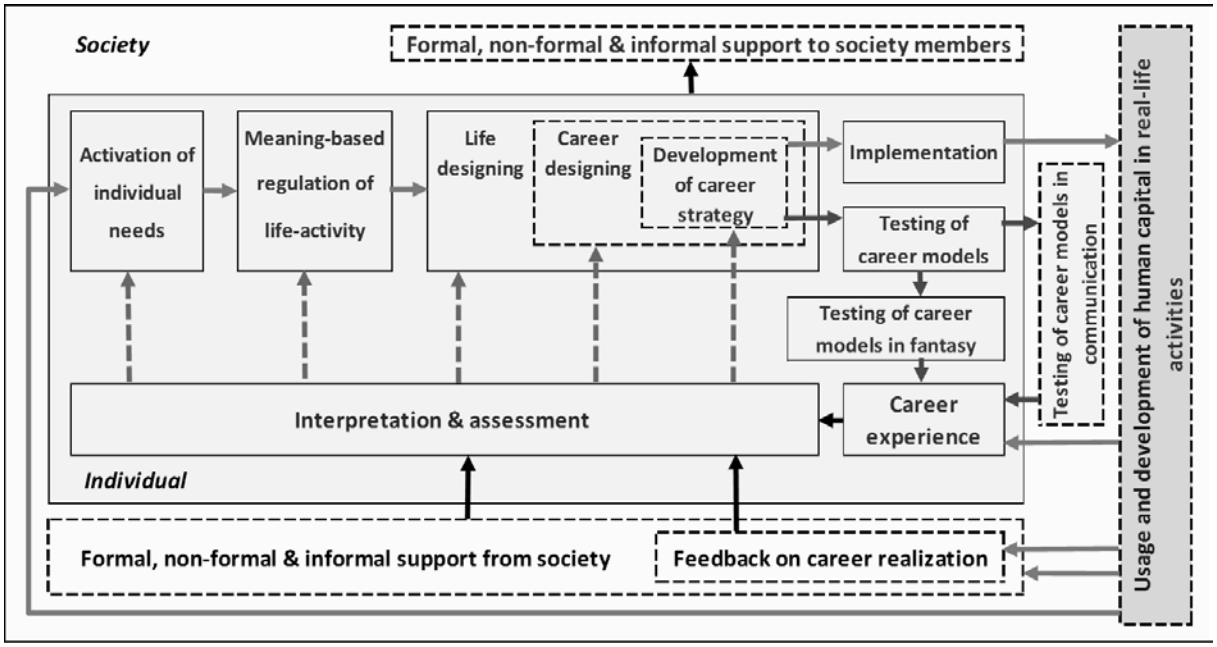

Figure 1. Career Management Cycle: Constructivist Model (Author's construct).

The career management cycle model developed by the author (Figure1) is based on the application and development of career management competence using constructivist approach and consists of activation of individual needs, meaning-based regulation of life-activity (and career as a subsystem of life-activity), life designing (incl., career designing as a subsystem of life designing), development of the career strategy and successive testing of the career strategy models in fantasy and/or communication, and/or implementation of the career strategy in real life activities. Meaning-based regulation of life-activity is based on the meaning-based structures of personality, and depends on the quality of those structures. Life and career designing is based on the mental models of life and career (subjective identity forms, career identity, personal career theory, etc.) and consists of goal-setting, career modelling, testing and optimization of the career models, selection of the most appropriate model for realization, examination of the conditions and resources. Career management is a *circular process* with *iterative rounds of action, reflection and updating of goals* (Ibarra, 2003, 34), therefore incomplete career designs (career strategies) can be immediately tested in fantasy or in the communication process, as well as (if one has such an opportunity) in real-life activities, evaluated and further improved in the processes of life/career designing.

Testing of the career models in communication and their realization in real-life activities constitute career experience as well as make changes in society (dashed lines). Realization in real-life activities

also promotes changes in the system of individual needs, and has an influence on formal, non-formal and informal support (e.g., career guidance, investments in human capital) from society, as well as serves as a basis for external feedback on the process and results of individual's career.

The constructivist model of learning is based on the interpretation of experience, individuals *interpret it, organize it, and infer about it with the cognitive structures they have previously constructed* (Fosnot, 2005), therefore interpretation and assessment of career experience are in the centre of the model. Individuals interpret and assess their career experience, feedback and support received from society. Interpretation and assessment lead (dashed lines) to assimilation of new experience in the underlying mental structures (not showed) or to accommodation of the given structures (Piaget, 1985). Interpretation and assessment lead to the changes in the meaning-based structures of personality (triple-loop learning), mental models of life and career (e.g., career identity) (double-loop learning), as well as in the career strategies (single-loop learning) and can influence the system of individual needs. Thus, realized cycles of career management lead to the progressive development of the ability *to hold and use mental images*, which allow individuals to *formulate* better their *values, beliefs, goals, and strategies* (Fosnot, 2005) and is an important prerequisite for the further development of career management competence.

Conclusions

The career management model developed by the author is based on the constructivist approach and includes assumptions created on the basis of several theories such as career, learning, activity and project management theory. Career management in contemporary, rapidly changing labour markets and societies can be considered as a learning process, which is focused on development and maintaining of employability – synergistic combination of career identity, personal adaptability, and social and human capital. Career management is a process where career management competence is used and developed and can be described as career project management. Career management competence can be described as the ability to handle career situations; to mobilize and combine personal and external resources and to use them in the implementation of appropriate activities to achieve the desired results; to cooperate with others and to be able to attract scarce resources; and to learn from experience. Career can be broadly defined as the usage and development of human capital in the labour market or in non-market activities. Successful career meets (or exceeds) not only personal needs and expectations but also those of society from individual's career projects.

Bibliography

1. Argyris C. (2006). Teaching smart people how to learn. *Reflections*, Vol. 4 (2), pp. 4–15.
2. Boyatzis R.E. (1982). *The competent manager: A model for effective performance*. John Wiley & Sons, New York, USA, p. 308.
3. Bronfenbrenner U., Morris P.A. (2006). The Bioecological Model of Human Development. In Lerner R.M. (Ed.) *Handbook of Child Psychology*. 6th ed., Vol. 1: Theoretical Models of Human Development, John Wiley & Sons, Inc., Hoboken, NJ, USA, pp. 793 - 828.
4. Career Education and Guidance in New Zealand Schools (2009). Ministry of Education, Wellington, New Zealand. [online] [15.01.2014]. Available at http://nzcurriculum.tki.org.nz/Curriculum-resources/Career-education
5. Cedefop (2011). *Glossary: Quality in education and training*. Publications Office of the European Union, Luxembourg, p. 240.
6. Cheetham G., Chivers G.E. (2005). *Professions, Competence and Informal Learning*. Edward Elgar Publishing, Cheltenham, UK, p.337.
7. Cochran L. (1994). What is a career problem? *Career Development Quarterly*, Vol. 42 (3), pp.204–215.
8. DeFillippi R.J., Arthur M.B. (1996). Boundaryless contexts and careers: A competency-based perspective. In M.B. Arthur, D.M. Rousseau (Eds.). *The boundaryless career. A new employment principle for a new organizational era*). Oxford University Press, New York, USA, pp. 116-131.

9. Fosnot C.T. (2005). Constructivism Revisited: Implications and Reflections. *The Constructivist*, Vol. 16, No. 1. [online] [15.01.2014]. Available at http://www.constructivistassociation.org/journal/the-constructivist-archive
10. Fugate M., Kinicki A.J., Ashforth B.E. (2004). Employability: A psycho-social construct, its dimensions, and applications, *Journal of Vocational Behavior*, Vol. 65, pp.14–38.
11. Guichard J. (2006). Theoretical Frames for the New Tasks in Career Guidance and Counseling, *Orientación y Sociedad*, Vol. 6, pp. 1-14.
12. Guichard J. (2009). Self-constructing, *Journal of Vocational Behavior*, Vol. 75, pp. 251–258.
13. Guichard J., Pouyaud J., de Calan C., Dumora B. (2012). Identity construction and career development interventions with emerging adults, *Journal of Vocational Behavior*, Vol. 81, pp. 52–58.
14. Haase S. (2007). *Applying Career Competencies in Career Management*. PhD thesis. Coventry University, Coventry, UK, p. 344.
15. Hall D.T., Chandler D.E. (2007). Career cycles and mentoring. In Ragins B.R., Kram K.E. (Eds) *The handbook of mentoring at work: Theory, research and practice*. Sage Publications, Thousand Oaks, CA, USA, pp. 349-370.
16. Harrington H.J., McNellis T. (2006). *Project Management Excellence: The Art of Excelling in Project Management*. Paton Press LLC, Chico, CA, USA, p. 214.
17. Holland J. (1997). *Making Vocational Choices*. Psychological Assessment Resources, Inc., Lutz, FL, USA, p. 303.
18. Ibarra H. (2003). *Working Identity*. Massachusetts Harvard Business School Press, Boston, USA, p. 200.
19. *Izglītības likums* (1998). (Education Law). Latvia. [online] [15.01.2014]. Available at http://likumi.lv/doc.php?id=50759 (In Latvian)
20. Kaptelinin V., Kuutti K., Bannon L. (1995). Activity theory: Basic concepts and applications. *Human-Computer Interaction. Lecture Notes in Computer Science*. Vol. 1015, pp 189-201.
21. Killion J.P., Todnem G.R. (1991). A Process for Personal Theory Building, *Educational Leadership*, Vol. 48 (6), pp. 14 – 16.
22. Laroche M., Mérette M., Ruggeri G.C. (1999). On the Concept and Dimensions of Human Capital in a Knowledge-Based Economy Context, *Canadian Public Policy – Analyse De Politiques*, Vol. XXV, No. 1, pp. 87–100.
23. Le Boterf G. (2008). *Repenser la compétence.* (Rethink competence) Groupe Eyrolles, Paris, France, p.140. (In France)
24. Le Boterf G. (2010). *Professionnaliser. Construire des parcours personnalisés de professionnalisation*. (Professionalize. Construct individual courses of professionalization) Groupe Eyrolles, Paris, France, p.146. (In France)
25. Leontiev D.A. (2005). Three Facets of Meaning, *Journal of Russian and East European Psychology*, Vol. 43, No. 6, pp. 45–72.
26. Levinson D. (1986). Conception of adult development, *American Psychologist*, Vol. 41, pp. 3–13.
27. Maddi S.R. (1968). *Personality theories: a comparative analysis*. Dorsey Press, Homewood, Ill, USA, p. 520.
28. Miller R. (1996). Measuring what people know: human capital accounting for the knowledge economy. Paris, France, OECD, p. 114.
29. Mulder M. (2011). The concept of competence: blessing or curse? In: I. Torniainen, S. Mahlamäku-Kultanen, P. Nokelainen, P. Ilsley (Eds). *Innovations for Competence Management*. Lahti University of Applied Sciences, Lahti, Finland, pp. 11-24.
30. Patton W., McMahon M. (2014). *Career Development and Systems Theory: Connecting Theory and Practice*, Sense Publishers, Rotterdam, Netherlands, p. 476.
31. Peruniak G.S. (2010). *A Quality of Life Approach to Career Development*. University of Toronto Press, 221 p.
32. Piaget J. (1985). The Equilibration of Cognitive Structures: The Central Problem of Intellectual Development. University of Chicago Press, Chicago, USA, p. 160.
33. Reinhardt K., North K. (2003). Transparency and Transfer of Individual Competencies – A Concept of Integrative Competence Management, *Journal of Universal Computer Science*, Vol. 9 (12), pp. 1372-1380.

34. Rogers C.R. (1959). A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework. In: S.Koch (Ed.), *Psychology: a study of a science*, Vol. 3, McGraw-Hill, New York, pp. 184-246.
35. Salganik L.H., Provasnik S.J. (2009). The Challenge of Defining a Quality Universal Education. Mapping a Common Core. In Cohen J.E. and Malin M.B. (Eds) *International Perspectives on the Goals of Universal Basic and Secondary Education*, Routledge, London, UK, pp. 252 – 286.
36. Sandars J. (2006). Transformative learning: the challenge for reflective practice, *Work Based Learning in Primary Care*, Vol. 4,pp. 6–10.
37. Savickas M.L. (2002). Career Construction: A Developmental Theory of Vocational Behavior. In S. D. Brown & Associates (Eds.) *Career choice and development: Putting theory and research to work*. Jossey-Bass, Wiley & Sons, Inc San-Francisco, CA, USA, pp. 149–205.
38. Savickas M.L. (2011). New Questions for Vocational Psychology: Premises, Paradigms, and Practices, *Journal of Career Assessment*, Vol. 19(3), pp. 251 – 258.
39. Savickas M.L., Nota L., Rossier J., Dauwalder J-P., Duarte M.E., Guichard J., Soresi S., Van Esbroeck R.,van Vianen A.E.M. (2009). Life designing: A paradigm for career construction in the 21st century, *Journal of Vocational Behavior*, Vol. 75, pp. 239–250.
40. Schön D.A. (1987). Educating the reflective practitioner: toward a new design for teaching and learning in the professions. Jossey-Bass, San Francisco, USA, p.355.
41. Sears S. (1982). A definition of career guidance terms: A National Vocational Guidance Association perspective, *Vocational Guidance Quarterly*, Vol. 31(2), pp.137-143.
42. Senge P. (2006). The fifth discipline: The Art and Practice of the Learning Organization, DoubleDay, London. UK, p. 445.
43. Shenhar A. (2004). Strategic project leadership: Toward a strategic approach to Project management, *R&D Management*, Vol. 34, pp. 569-578.
44. Sterman J.D. (1994) Learning In and About Complex Systems, *System Dynamics Review*, Vol.10, No. 2–3, pp. 291–330.
45. Sullivan S.E. (1999). The changing nature of careers: A review and research agenda, *Journal of Management*, Vol. 25(3), pp. 457–484.
46. Super D.E., Super C.M., Savickas M.L. (1996). A life-span, life-space approach to careers. In: D. Brown, L. Brooks, & Associates (eds), *Career choices and development* (3rd ed.). Jossey-Bass, San Francisco, USA, pp. 121–178.
47. Каменская Е.Н. (2009). Психологическая компетентность преподавателя вуза: понятие и структура (Psychological competence of the teacher of higher education institution: concept and structure), *Вестник ТИУиЭ.* 2009. №1. С.95-99. (In Russian)
48. Карпинский К.В. (2002). *Человек как субъект жизни.* (Person as a subject of life) Гродно: ГрГУ, 280с. (In Russian)
49. Леонтьев А.Н. (1975). *Деятельность. Сознание. Личность*. (Activity. Consciousness. Personality.) Москва, Политиздат, 304 с. (In Russian)
50. Новиков А. М. (2010). *Основания педагогики* (Basics of pedagogy), Москва, ЭГВЕС, 208 с. (In Russian)
51. Синицкая Н.Я. (2006). Развитие человеческого потенциала – цель и главное условие социально-экономического развития регионов, (Development of human potential – the purpose and the main condition of social and economic development of regions) *Вестник Национального комитета «Интеллектуальные ресурсы России»*, 4/2006, С. 49-55. (In Russian)
52. Сорокин П. (1992). *Человек. Цивилизация. Общество*. (Person. Civilization. Society.) Москва, Политиздат, 543 с. (In Russian)

Entity of Dialogue in Career Guidance of Secondary Vocational Schools

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Abstract: Dialogue is currently one of the main instruments used in career guidance practice in education and employment, including, also in secondary vocational education. Entity of dialogue in students' career guidance can be provided systematically organized interventions that are integrated into the school's educational process and where their contribution is willing to give not only a career counselor, but also school teachers and other stakeholders. Such progressive dialogical interaction reveals interrelationships among all three components of career guidance - career information, career education and individual counseling. Therefore in scientific article is to answer the following ***questions***: Is there mutual correlation among the career guidance components? Whether there is a dialogue among career guidance components in secondary vocational education? Aim of the study is to identify and to assess the entity of a dialogue in career guidance in secondary vocational education. Objectives: 1) to explore the role of the dialogue in the students' career guidance of vocational education; 2) to evaluate the career guidance components - career information, career education, individual counselling and their interaction in the development of dialogue.

Keywords: Career guidance, career information, career education, career counselling, entity of dialogue.

Introduction

On the entity of dialogue in career guidance notes dynamic socio-economic processes, both worldwide and in Western Europe. Humans, like society as a whole has to deal with the challenges of the 21st century - the rapid development of the labor market and the varied career opportunities that reveals the fact that career choice is becoming increasingly difficult and more complicated (Learning for .., 2011). Those circumstances have contributed a paradigm shift in career guidance. As one of main instruments of intervention emphasizing dialogue that helps an individual to cope with uncertainty, doubts and varied labor market offer and career in the construction of his life. Early as 1997 the Canadian scientist V. R. Peavey (1997) wrote that the context of constantly changing labor market changed also own individual career counselling process, which by its nature has become a sociodynamic - with a global perspective on contemporary social life and constructivist philosophy, which means to help, so by changing counselling practice in its entirety. counselling in career guidance means the communication process, the aim of which is to provide advice and emotional support, to show understanding, to go into the client's situation, enabling the customer to realize its potential to help oneself and encourage to adopt reasoned decisions (Peavy, 2001). Such counselling is based on dialogue which an aim is with them and their life satisfied person. It means that in order to understand own life and career development, an individual tells a variety events of own life, but career counsellor helps to formulate, evaluate and to create good ideas on how his client could live his life (Peavy, 2004, 24). To achieve this, the career guidance is growing emphasis on client' proactivity in shaping of their life. So now the career guidance is defined as a person's whole life, which constructed by himself, interacting with the surrounding social environment (Savickas, Nota, 2009; Peavy, 2004). Dialogue of career guidance is referred as a cultural tool or artifact invented by human, because counseling is much more sensitive in the context of post-industrial than it was before. It means that there are used such as mental devices like as concepts, ideas, words and diagrams, which are used for cultural discourse through which are created feelings, meanings, constructed reality and communication takes place (Peavy, 2001). Therefore, the use of dialogue has gained an important place in career counseling, ahead of the psychological techniques (Guichard, 2013; Savickas, 2005; Peavy, 2001).

Career guidance is defined as a set of measures that include availability of career information, career education and individual counseling for students career planning and target setting in the choices relating to education and work (Career Guidance…, 2004; ELGPN Glossary, 2012; Izglītības likums, 2013). Scientists A. G. Watts (2010), R. Vuorinen (2012), P. Plant and R. Thomsen (2012) believes

that the implementation of career guidance measures at all levels of education can achieve both short and long-term goals. A scientists group leading by D. Hughes and S. Bosley (Hughes, Bosley, 2002, 8-9) has figured that short-term objectives are achieved by providing information and advice in such a way improving an individual's knowledge, skills and motivation for self-employment. In turn, long-term goal related to both with individual and the economy as a whole. At policy level, these objectives are seen as a one of the initiatives of development of human resources. Thereby in provision of career guidance are involved all levels of education establishments, the State Employment Agency, private institutions, etc. companies. Career support services such as long-term measures are designed to encourage the choice of individual professions and educational direction according to his abilities and interests as well as to develop the skills independently to manage own career life.

Scientists R. Sultana and A. G. Watss (2005) as well as E. Hansen (2006) found that career guidance consists of three components: career information, career education and career counseling. They can be seen as three-stage types of services providing information, guidance and counseling with progressively increasing interaction between a career counselor and the client and which allows client to make decisions about their life, learning and work. It reflects the learning process, job and personal life interactions of individual. Whereas the dynamic changes of the recent years in the global labor market has been affected by changes in the career development process, they expressly have tagged invaluable role of individual as a unique, free, socially responsible and proactive beings in shaping of his life. Therefore, the third component of career counseling is increasingly obtained the status of individual counseling (Hansen, 2006). The career guidance is defined similarly in Concept of "Career development support system" approved by Latvian Cabinet of Ministers (Par koncepciju..., 2006) and the Amendments to the Law on Education (Grozījumi Izglītības..., 2013).

One of the functions of career guidance in the education system is the cognition and evaluation of learners' needs and expectations watching them everyday learning process and to see the progress of their knowledge, skills and attitudes. It means that career guidance of learners must be continuous until they are able to successfully integrate into the labor market (Guiding At-Risk…, 2010). Assessing the career guidance in vocational education system, it is still necessary for students, despite the fact that they have already made a first professional choice because not always made the right choice and yet during the learning process it can be changed. Therefore is important not only involvement of parents but also career professionals, teachers and potential employers in students' career development. It can be illustrated by D. Super (1990) findings that the essential feature of young people (between 15 and 24 years) is a searches of the career opportunity and meaningful life, which often need assistance and advice from the sidelines. Data of the State Employment Agency shows that in January 2015 was unemployed 9.2% of young people from the total number of registered unemployed (Bezdarba situācija..., 2015). If the educational environment, including vocational training environment should be provided with systematic guidance, it would be possible to better motivate students not to leave initiated training and education programs. Drop-out number of students of secondary vocational education schools was ~ 20% in the first academic year, but overall proportion of the drop-out was ~ 6.1% of the total number of students (Izglītojamo skaits..., 2015). The above problem would be less if efficiently used career dialogue as a common way of thinking, reflection and cooperation among all stakeholders for the development of innovative understanding of successful construction of the students' life and career. Dialogue can be found in all three components of career guidance. Firstly it gets the *subject - subject* relations as an individual dialogical communication with himself, acknowing their interests, desires, skills and character traits; and between the individual and the surrounding social environment. Secondly, it is a the *subject - object* dialogical activity, his interacting with guidance and its three components - information, education and individual counseling and the parties involved to help him construct his career.

Methodology

The study consists of a theoretical discussion and empirical research on the role of dialogue in the career guidance for students of vocational secondary education, raising the following research issues: Is there mutual correlation among the career guidance components? Whether there is a dialogue among career guidance components in secondary vocational education? Based on the theoretical

scientific cognitions: 1) is explore the role of the dialogue in the students' career guidance of vocational education; 2) are described the career guidance components - career information, career education, individual counseling and their interaction in the development of dialogue. There is a survey, which showed teachers' views about career guidance in secondary vocational education schools. The survey involved 28 teachers from Riga, Zemgale, Kurzeme and Vidzeme regions.

Results and discussion

Although the career guidance is increasingly being considered as a key strategic tool in the implementation of lifelong learning policies of the European knowledge society, there is still need for guidelines of encouraging people to continue develop their knowledge, skills and competences over a lifetime related to the changing needs of the labor market (From policy..., 2008). Career people spend all his life, so it is should be a constant focus of its planning and implementation, especially on the social and economic factors, as well as the individual's ability, character and capabilities what provides the life itself. These factors are closely linked to the human personality development stages. D. Super (1953) believes that the inherent personality trait is a career maturity, as well as successful execution of the career development tasks in accordance with the person's age and achievements. Childhood and teenage years are the two most important stages of life when a person grows not only physically, but her personality is laid for the development of self-knowledge bases on which to successfully create interest of profession and career. Therefore, both the time when carried out the first serious professional choice and its acquirement requires qualitative and systematic career guidance. In turn, N. Amundson (2003, 27) believes that assistance helps the student to define their values and make informed decisions for future action, because they are fundamentally dependent on an understanding of what he wants to do. Here are searched answers to questions about his life, which can only be obtained if have already thinking or begin to think and discover opportunities that become important in his later life.

Both authors' indirect observations and analysis of different Latvian education documents (Par koncepciju..., 2006; Guiding At-Risk…, 2010; Karjeras attīstības..., 2013) suggests that implemented services of career guidance in vocational education establishments does not reach the planned results, because they takes place a fragmentary and not always accessible to all. This is evidenced by survey of secondary vocational education teachers who gave their views on career guidance in their work places. To the question "Does students are taken of career guidance measures in your vocational educational establishment?" 12 of the 28 respondents answered that students' career guidance is done, while the 1/3 or 9 teachers are convinced that it does not happen, and 6 of respondents not really sure about the existence of these measures. 11 respondents said that it is administered by either the school principal (5), or deputy director (6). Two respondents believe that student' career development and employment paths taken by potential employers who are at the same time also managers of students' practice. One respondent believes that career guidance should be done outside of school through the local employment services. Nevertheless the greatest work of students' career development shall be carried out subject teachers (75% of the total number of responses), it also reveals the real situation in secondary vocational education system, namely that qualified career counselors are not involved in the students' a career guidance - none of the respondents did not mention that their schools working a career counselor.

However asking the question "Does your secondary vocational school is required systematic career guidance?" nearly all respondents (89%, or 25 out of 28 respondents) answered positively: it should be with a systematic preventive nature, because not all students are able to justify their professional choice and learning motivation. On the question, "What the students get, if a career guidance as a systematic service would be integrated into the school's educational environment?", the views of surveyed teachers were as follows: it will improve students' motivation for learning; develop a deeper understanding of their future occupation; the student envisage a meaning of learning and most developed sense of their personality; would be seriously evaluated and selected the most appropriate direction of the chosen professional field; expand students' views and choices to find their place in the labor market.

Asking the question, "How is integrated a career support school educational environment?" 20 teachers felt that most those are lessons where learning curriculum is related with students' future occupation. These are negotiating with the group's mentor (14) because them frequently listens the students and require a case, they know they can seek and receive support at times when addressed not only issues of training and education, but also their personal life issues. Also, 14 teachers believe that learning excursions to the organizations to help create more objective insight and understanding about the learned curriculum. 12 teachers are convinced that the information / advice / assistance that student receives from his peers is also an important informal support because they make personal contacts for cooperation, which can be a valuable medium of their career development.

In turn 9 teachers were answered that a valuable source of information and the convenient place is school library because there can seek a career information not only print, but to use the Internet access and e-mail. Usually it is one of the most important internal career development supports providing information at school. If the student has only required information on general issues of his career, he can handle himself without any help, but when must seek the necessary bibliographic resources, he may seek the assistance of a librarian. 9 out of 12 teachers believe that contribute to students' career development gives a meetings with the local entrepreneurs. Well as Shadowing Day (7) and the various projects (5), are the activities what noted vocational school teachers. However, none of the teachers did not mention that the students create portfolio' folders in which they stored their learning experience proofs. Basically, portfolio folder has one of the factors that help a young person to explore oneself: be aware of own strengths and weaknesses and improve self-esteem.

On the question "Do potential employers participating in developing of the content the curricula and practices?" more than half (15 of 28) of surveyed vocational teachers responded that they have not felt this kind of involvement of local entrepreneurs. Only 1/3 of respondents given an affirmative answer, but 6 of them have doubts about it. It means that cooperation between the two institutions has insufficient which does not contribute students' integration into the labor market. Based on the above described data, can be concluded that career guidance has not yet become an integrated package of measures throughout the training process, which is operated by a qualified career counselor together with school' teaching staff and stakeholders. But there is no watches a sufficient link with measures what to promote the students' motivation to learn, to improve their success and to reduce the number students who leaving school. Career guidance and counseling are most often organized in learners' groups by applying the "average" student, and these measures are often not very effective for the groups at risk or particularly gifted students.

Currently, career guidance is viewed in the context of lifelong learning, in which center is located individual with his life and career experience. It is defined as a set of activities that allow individual to identify their skills, abilities and interests and to take the career decisions for guiding own life pathways in education and work as well as in other circumstances (European Lifelong…, 2014).

Career guidance usually involves a number of activities that encourage individual to create positive vision of their future, as well as to plan and implement activities which bring them closer to the intended achieve the objectives (Borbély-Pecze, Hutchinson, 2013, 10). A key role of career guidance is to be a mechanism through which is promoted a smooth transition from education to work, thereby allowing more and more effectively functioning labor market. One may agree with a recognition of B. A. Irvin and B. Malik (Irvin, Malik, 2005, 4-5) that in first, career guidance in this manner provides a real objective information and assistance that is appropriate to the reality of the labor market; in secondly, it enable an individual to develop their skills to think and act critically. N. Amundson (Amundson, 2003, 27) says that the career development process, which is usually conceptually designed, logical, controlled and sequential row of different interventions, an individual first of all learn to find a relevant and accurate information about the world of work, as well as to get advice and individual counseling. In turn, B. Law (Rethinking Careers..., 2005, 211) writes that it is interpersonal, hence, dialogical process, which plea consists of questions for discussion which do not need to know in advance.

When viewing the entity of dialogue in career guidance and counseling is needed to characterize each of the supporting components. The first component is *career information* whose extraction is an

important part of the career planning process because it helps the individual to discover whether the chosen profession is appropriate for him. E. Hansen (Hansen, 2006, 28) writes that the career information is the basis for providing career guidance services. It includes all the information that helps an individual to make an informed choice on education, vocational training and on his working life as a whole. Besides, given the career information must be up-to-date and accessible for each individual in the level of self-service; it must be capable to cheaply reproducible and in large quantities; must take account a level of reading skill of the target audience, as well as must be responsible professional of career guidance who disseminate this information. In addition, N. Amundson (2003) believes that the information collected must be coordinated and consistent with the individual's self-realization and supportive context, because it facilitates a well thought-out decision making of career. As written by W. Patton and M. McMahon (2006), this is particularly important now when increasingly is being used constructivism approach to career guidance where information collection, compilation and use in various ways is a key role in an individual's career development.

The second component of career guidance - the *career education* is a planned set of measures, courses and programs in the schools for teaching students to learn and develop the skills on commensurability of their interests, abilities and possibilities; in putting forward a career targets as well as the career planning and management throughout their lives (Izglītības likums, 2013; Karjeras konsultāciju..., 2009). The career education goal is to help learners to make informed decisions about their training and / or employment opportunities so that to be able to participate fully in the labor market. Therefore, the career education should be attractive, evolving, comprehensive and accessible to all. The Australian scientists W. Patton and M. McMahon (Patton, McMahon, 2001, 13) have figured out that in developing and implementing process of career education programs, it is important to be aware of the context in which occur the learners' career development and career decision-making, because without learning it is also influenced by factors such as the variables of individual, social and environmental context.

The final stage of career guidance is an individual *career counselling* with a personalized, individual approach, which corresponds to an individual's specific needs (Sultana, Watts, 2005). In this way is formed an individual' vocational or careers identity that is based on his ability assessment and targeted career guidance provision, which includes not only the career management skills, but also draws more attention to the young person's rights and responsibilities, recognizing that the himself must take responsibility on their career development (Kuijpers, Meijers, 2011). Such an identity acquires a well-structured form of stories which are based on his life themes (Savickas, 2005). Has to agree with cognition of J. McLeod (McLeod, 2003, 17) that learners have to appear voluntarily and prepared on individual counseling - when they are understanding and aware their career development problems for the right decision-making. Then this cycle of individual counseling is a form of support centered on the individual's needs and objectives and provides an opportunity to help be aware own capacities and situations well as to support and to encourage their in the fuller use of own potential and possibilities. Identifying an individual's personal interests, skills and competencies, career choice is made on trusted and useful process (McLeod, 2003, 12-13). As shown study of the career guidance' measures in vocational education of the European Union countries, are increasingly providing these services schools collaborate with external partners or constitute a multi-agency services with a holistic approach to addressing the vocational needs of students.

According to the researchers of European Centre for the Development of Vocational Training (CEDEFOP) for many students are sufficient only career information, but it is not enough for most disillusioned young people who need more holistic support (Guiding At-Risk…, 2010). Whereas developed careers vision during the adolescence its role can also save later in life, it is important that guidance professionals encourage young people to set ambitious goals. In order to keep these goals and to develop, young person must actively engage in a dialogue with the surrounding environment and themselves.

All three components of career guidance has recursive character - it means that an individual can repeat any of the guidance activities in own career development process in order to strengthen both the obtained information and the knowledge, skills and confidence about correctly chosen careers direction. Similarly, all three guidance components have cyclicality, revealed when the individual is

realized the current careers goals through their career identity and feel the need to bring forward further careers goals. Both guidance traits are because individual' career development is accompanied by dialogue. It can see in the relations of *subject - subject*, as a dialogical communication between individual and himself (internal dialogue) and among others (external dialogue). Secondly, dialogue can form relations of the *subject - object* in the form of a dialogue activity in which an individual is interfacing with a careers counselor, teachers and other stakeholders as well as with the three components of career guidance - information, education and individual counseling at school environment. In both dialogical relations student create their own vocational identity through continuous dialogical activities related with self-convincing and the information that he receives from others. P. McIlveen and W. Patton (2007) write that the internal dialogue is proposed and brought to the operation the individual's identity through negotiations. M. Savickas (2002) believes that focusing on past events and memories, individual dialogue with themselves creates life themes that become a starting point for careers problems are viewed and analyzed in the present and future perspective. N. Burbules (1993) writes that the dialogue is characterized free and open participation of any participant, during which they come forward alternately with statements, questions, answers and repetitions of variable duration, thus creating a sequence of communication, which are constantly evolving through research and inquiring mood. It provides of communicative interchange with itself and others, which is driven by the desire to look at the nature of the problem in order to reach a meaningful understanding and accordance between participants.

B. Law (Rethinking Careers..., 2005, 104) writes that career guidance work in the school environment consists of a number of learning settings, capable of responding to the different needs of students, their knowledge in different learning stages, to respond to their different learning styles, feelings and complexity levels for their career development. B. Law offers it to see in two dimensions - as the expansion and development. Expansion means that are used a number of learning settings where is involved increasing number of people and requires increasingly agreements, let the career guidance work to be successful. Development means that there is a need to invest increasingly time, skills and other resources for the students' career development. However career guidance work can also be seen through a continuous dialogue in different ways and with increasing intensity, which also acquires features of educational dialogue (see Fig. 1).

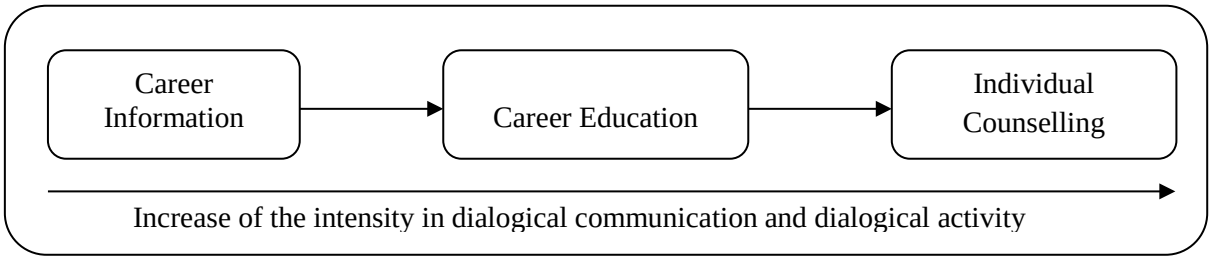

Figure 3. Increase of the intensity in dialogical communication and dialogical activity in career guidance.

In school learning process it driven directly or indirectly, either career counselor or teachers pursuant elements of didactic methods, including moments of silence, allowing the student to express independently, despite the inaccuracies in his statements, but in the end of dialogue is reaching that he himself defines the desired cognitions. Such dialogue provides an opportunity to track of progress of student' thoughts and his real ability to follow career professional 'driven counseling or teacher' curriculum sets out the conduct and to adjust it.

In the developed pattern of B. Law (Rethinking Careers..., 2005, 104) is discernible dialogical communication and dialogical activity, in whose center is located student and they needs to develop own vocational identity and career. The given learning settings in the school' career guidance includes a variety of learning ideas and dialogue forms to speaking by words of J. Dewey' (1997), belonging to a set of discourse where learning process should be exchange of experience. It means that student acquires his experience, what he offers the surrounding social environment, in turn, whom he can be interpreted in own career development. For example, in the first learning setting "Career resources work" student finds and reads the information that encourages himself reflection and self-awareness.

The second learning setting "Face to face help" student can ask and talk with teachers and / or career professionals. This is a work in small groups or individually, which helps to explore themselves and the world of work, to plan his career and decide how to proceed. The third learning setting "Recording, action planning and portfolio' work" student should be possible to write an action plan for implementation of own professional aspirations. It will help him to develop remarks about their experience, capabilities and own intentions in relation to working life. In the fourth learning setting "Personal and social education" the student shall inform of his careers plans. It means that he needs to link their career plans with other expectations / intentions / plans - as a citizen, as a consumer, as a family member, etc., as the holistic person who carries out many social roles and has dialogical relations with the closest social environment. Here student acquire learning experiences in dealing with work and life problems, which expressed nature is related with more personal, social and moral context nature. In the fifth learning setting, "Specialist careers education classroom work" can help students to understand, create and to use learned social skills of the previous setting, let to get assistance and training the teacher-expert (specialists of the companies) on site of classroom. Student working in the various planned activities, which are examined in detail the most important aspects of the work carried out by these teachers-experts. It helps the student to develop a realistic picture of the chosen careers direction. In the sixth learning setting "Integrated work" student' careers plan could derive from what the subject' teachers in their lessons have said or encouraged to think and operate the student in practice connected with their future occupation. In such way, student development learning link with working life situations. In the seventh learning setting "The community-linked activities" means cooperation with the local employers and the community in which the student has much more possible to recognize the correlation between their life and all of what he learns in school.

B. Law (Rethinking Careers..., 2005, 107) described the career guidance work in mutually integrated career development levels: level-A links are needed to subject' teachers should be prepared to recognize the value of career development to integrate into their educational work with students. Level–B relationship develops from links of level-A where colleagues / teachers support the careers measures and have interested in self contributing to careers support. Such a movement is determined that the school is ready to accept departmental initiatives that are proposed also in the level of classroom. In turn, level-C is the basis for long-term co-ordination and co-operation projects, which require different involvement of stakeholder in common career guidance work of the students.

Based on the above written, it is reasonable to assume that all three components of career guidance is containing dialogue of what it characterized D. Bohm (Bohm, Factor, 1991) - as an activity that is based on serious negotiations, which encourages individuals to think; as the mutual learning process and creative participation between participants in the dialogue. Such career guidance has a socio-dynamic nature to be determined by at the existing dialogue that reveals wholeness of the individual, his capacity, identity, self creation and transformation (Peavy, 2001). It is on the career-oriented learning environment where student can get a real life and work experience as well as learning according to his professional interests and qualifications. He can participate in career-oriented dialogue about their learning experiences and their future occupation, thus creating their own personal stories that reveal the nature of the problem (Meijers, Lengelle, 2012). Such a learning environment changes his thinking and leads to a purposeful activity (Amundson, 2003, 161). In dialogical communication student begins to see meaning of the events of his life in the scope of time, looking at their problems from the past, present and future perspectives. Assistance and encouragement of career counselor on the student to speak, helps to think of ourselves as the targeted personal being that has his own *Self*. When he reveals his identity, then have clear vision of his future actions, and can then to understand what kind of assistance is needed (Kidd, 2006, 41). One may agree with cognition of N. Amundson (2003) that career counseling requires the active involvement, because it is a creative process and it is widely used dialogue: storytelling, interview, operational strategies and developing of relationships, leading to occurs the creation of the meaning- making, both from the student' and the counselor' perspective.

Conclusions

- Among the three components of career guidance - careers information, career education and individual careers counseling there is a mutual relationship where careers information is the basis to initiate an individual's careers development. In turn, the second component - careers education which is integrated into the curriculum of school education environment provides an opportunity student to develop career management skills. But the third component - individual career counseling such as consultancy cycle shows own learner engaged and informed cooperation with career counsellor, under whose direction he solves problems of their career and take a right decision.

- All three career guidance components has visible in various ways in both the dialogical communication and dialogue-activity. Through dialogue is provided career guidance activities continued expansion in all educational settings of the secondary vocational school, **ranging** from students' self-awareness **till** cooperation with interested employers' organizations. **Dialogue is helping to focus the student on mutual consistency of his own ability, interest and his vocational activities because they everyone has own distinctive way of learning, personal experience and what they want to do at the moment.** The using of dialogue in career guidance is making a lasting contribution to the students' career development**,** motivating them to better learn and understand the purpose of own learning**,** as well as **to** graduating the secondary **vocational** education school **they** will successfully integrate into the labor market.

Bibliography

1. Amundson N. E. (2003). *Active Engagement: Enhancing the Career Counselling Process.* Ergon Communications, p. 312.
2. Bezdarba situācija valstī: 2015.gada janvāris. (The Unemployment Situation in the Country: January. 2015) NVA 15 lpp. (In Latvian)
3. Bohm D., Factor D., Garrett P. (1991). Dialogue – a Proposal. p. 8 [online] [20.11.2014]. Available at http://infed.org/archives/e-texts/bohm_dialogue.htm
4. Borbély-Pecze T. B., Hutchinson J. (2013). The Youth Guarantee and Lifelong Guidance. ELGPN Concept Note No. 4. The European Lifelong Guidance Policy Network, Jyvaskyla, p. 21.
5. Burbules N.C. (1993). Dialogue in Teaching: Theory and Practice. Teachers College Press: NY, p. 127.
6. Dewey J. (2009). Democracy and Education. Wilder Publications, p. 312.
7. European Lifelong Guidance Policies: Progress Report 2013–14. (2014). Ed. Vuorinen R., Watts A.G., The European Lifelong Guidance Policy Network (ELGPN), University of Jyvaskyla, Finnish Institute for Educational Research (FIER), Saarijärven Offset Oy, Finland. p. 85.
8. ELGPN Glossary (2012). Ed. Jackson C. The European Lifelong Guidance Policy Network (ELGPN), Edited by Jackson C., p. 40.
9. From Policy to Practice: A Systemic Change to Lifelong Guidance in Europe (2008). The European Centre for the Development of Vocational Training (CEDEFOP), p. 82.
10. Guiding At-Risk Youth through Learning to Work. Lessons From Across Europe. (2010). European Centre for the Development of Vocational Training (CEDEFOP) Luxembourg: Publications Office of the European Union, p. 180.
11. Guichard J. (2013). Career Guidance, Education, and Dialogues for a Fair and Sustainable Human Development. Proceedings of the Inaugural conference of the UNESCO, University of Wroclaw, Poland, p. 20
12. Hansen E. (2006). Career Guidance: A Resource Handbook for Low- and Middle - Income Countries. Geneva: International Labour Office, 120 p.
13. Hughes D., Bosley S., Bowes L., Bysshe S. (2002). The Economic Benefits of Guidance. University of Derby, pp. 9-10.
14. Irvin B. A., Malik B. (2005). Critical Reflection on Career Education and Guidance. Routledge Falmer, p. 202.
15. Grozījumi Izglītības likumā (2013). (Amendments to the Law on Education). Latvijas Vēstnesis Nr.142 (4948) (In Latvian).
16. Izglītojamo skaits izglītības iestādēs, kas īsteno profesionālās izglītības programmas 2013. /2014. m. g. sākumā. (Number of Students in Educational Institutions that Implement Vocational Education Programs at

the Beginning of 2013/2014 Study Year) [online] [12.01.2015]. Available at http://izm.izm.gov.lv/registri-statistika/statistika-profesionala/11937.html (In Latvian)
17. Karjeras attīstības atbalsta sistēmas darbības izvērtējums Latvijā (2013). (Career guidance system evaluation of Latvia). VIAA, 38 lpp. (In Latvian)
18. Karjeras konsultāciju etalonmērījums (2009). (Career counseling bench-marking), 94 lpp. (In Latvian)
19. Kidd J. M. (2006). Understanding Career Counselling: Theory, Research and Practice. SAGE publication Inc., 160 p.
20. Par koncepciju Karjeras attīstības atbalsta sistēmas pilnveidošana. (2006). (The Concept of the Career Development Support System). MK rīkojums Nr.214, 31 lpp. [online] [18.01.2015]. Available at http://likumi.lv/doc.php?id=132990 (In Latvian)
21. Kuijpers M., Meijers F., Gundy C. (2011). The Relationship between Learning Environment and Career Competencies of Students in Vocational Education. Journal of Vocational Behavior, Vol.78, pp. 21-30.
22. Learning for Jobs (2011). OECD reviews of vocational education and training. Pointers for policy development. 52 p.
23. McIlveen P. F., Patton, W. (2007). Narrative Career Counselling: Theory and Exemplars of Practice. Australian Psychologist, 42(3), pp. 226-235.
24. McLeod J. (2003). An Introduction to Counselling. Maidenhead: Open University Press, p. 613.
25. Meijers F., Lengelle R. (2012). Narratives at Work: The Development of Career Identity. British Journal of Guidance and Counselling, 40 (2), pp. 157-177.
26. Career Guidance: A Handbook for Policy Makers (2004). Organization for economic cooperation and development (OECD). European Communities, 79 p. online] [18.01.2015]. Available at http://www.oecd.org/education/innovation-education/34060761.pdf
27. Patton W., McMahon M. (2006). The Systems Theory Framework of Career Development and Counseling: Connecting Theory and Practice. International Journal for the Advancement of Counselling 28(2): pp. 153-166.
28. Patton W., McMahon M. (2001). *Career Development Programs: Preparation for Lifelong Career Decision-Making*. Melbourne: ACER, p. 13.
29. Peavy R.V. (1997). Sociodynamic Counselling: A Constructivist Perspective. Published by Taos Institute Publications, 262 p.
30. Peavy R.V. (2001). New Visions for Counselling in the 21st Century. Australian Journal of Career Development, Vol. 10, No.2, winter 2001, pp. 15-20.
31. Peavy R.V. (2004). Sociodynamic Counselling: a Practical Approach to Meaning Making. Published by Taos Institute Publications, p. 138.
32. Plant P., Thomsen R. (2012). Career Guidance in Denmark: Social Control in a Velvet Glove. Orientación y Sociedad, N°11, pp. 1-17.
33. Rethinking Careers Education and Guidance: Theory, Policy and Practice. (2005). Watts A. G., Law B., Killeen J., Kidd J. M., Hawthorn R., Routledge, 416 p.
34. Savickas M. L. (2002). Career construction: A developmental theory of vocational behavior. In D. Brown and Associate (Eds.), Career choice and development. San Francisco, CA: Jossey-Bass (4th edition, pp. 149–205.
35. Savickas M. L. (2005). The Theory and Practice of Career Construction. In Career Development and Counseling: Putting Theory and Research to Work, edited by S. D. Brown and R. W. Lent. Hoboken, NJ: John Wiley & Sons, pp. 42-70.
36. Savickas M. L. Nota L., Rossier J., Dauwalder J.P., Duatre M.E., Guichard J., Soresi S. (2009). Life Designing: A Paradigm for Career Construction in the 21st century. Journal of Vocational Behavior, p.12.
37. Sultana R. G., Watts A. G. (2005). Career Guidance in Europe's Public Employment Services: Trends and Challenges. Brussels: DG Employment and Social Affairs, European Commission, 119 p.
38. Super D. (1953). A Theory of Vocational Development. In: American Psychologist, No 8 (1993). Canada Advanced Education and Career Development, pp. 185-190.
39. Super D. (1990). A Life- Spam, Life-Space Approach to Career Development in Career Choice and Development: Applying Contemporary Theories to Practice, 2/e, by Brown D., Brooks L. Association, Inc. Publishers Reprinted by permission, USA, pp. 206-208.
40. Vuorinen R. (2012). Quality of guidance provision in Finnish education. National Conference on Lifelong Guidance. Entitled Consultation on Quality Standards in Lifelong Career Guidance, Ljubljana, Slovenia [online] [18.01.2015]. Available at http://www.ess.gov.si/_files/4250/raimo_vuorinen_guidance_quality_finland.pdf
41. Watts A.G. (2010). Career Guidance and Post-Secondary Vocational Education and Training. OECD, 9 p.

The Concurrent and Consecutive Models of Initial Teacher Training: Problematics and Tendencies

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Abstract: The article presents the review of the models of initial teacher training. There are two common models of teacher training in Lithuania: the concurrent (individual subject training + pedagogical training + practical activity) and the consecutive academic studies of a certain subject proceeding with the realization of teacher training. Both models have certain advantages as well as disadvantages. The article explores most common models of teacher training. It discusses the tendencies of the teacher training in the world and its reasons.

Keywords: models of initial teacher training, concurrent teacher training, consecutive teacher training.

Introduction

Relevance. Today, the importance of education is revealed by all the main European legal acts and reports, whereas the problematics of teacher training is becoming the central theme when talking about the quality and availability of education. "Motivated highly qualified teachers is the most important prerequisite for a good young people education" the publication of the Directorate-General for Education and Culture of the European Commission "The Teaching Profession in Europe" maintains (Mokytojo profesija Europoje..., 2002). The necessity to guarantee quality education is one of the main targets of the Strategic Framework for European Cooperation in Education and Training ("ET 2020"). The programme underlines that it is extremely important to ensure the appropriate training of teachers, continuing professional development of teachers and university teachers and achieve that the teaching profession would become attractive. In the conclusions of the European Council published in the March of 2013 regarding the investment to education and training in order to support the "Europe 2020" strategy, it is noted that it is necessary to review all the aspects of the teaching profession and enhance the profession by, for example, ensuring effective teacher training and the implementation of the consistent professional development system of pedagogues that is provided with appropriate employment, selection, teacher training, and support for an early career resources (Notices from European..., 2013). Science theoreticians maintain that the most important quality of any system is new quality which is created by the elements of a system through corresponding relationships. It is noted that every system creates new quality, if its elements are connected through corresponding relationships and function correctly (Cole, 2010; DuBrin, 2011). How does Lithuanian education system ensure the quality of teacher training, does it combine teacher training, support for young teachers and professional teacher development into one whole by creating a new quality system which the modern global society requires?

Scientific problem. Today, education quality is linked to the altered activity of pedagogues and students, the introduction of novelties, information technologies, distance learning, multicultural education ugdymo, interdisciplinary integration (Subotkevičienė, 2008). The research results of foreign authors show that the quality of the preparation of teachers make a huge positive influence on the knowledge of students, (Darling-Hammond, 2005) and that it is a defining factor that has influence on the learning results of students (Rivkin, Hanushek, 2005). Today, the role of the teacher has changed significantly due to the rapid development of information and communication technologies, and school governance reforms. The following challenges are posed to the modern European teacher: to present the taught subjects with European tinge; positive attitude towards the European dimensions (pluralism, multiculturalism, democracy); to develop a spirit of partnership; the knowledge of at least one European language; the knowledge of other educational systems; information and communication technologies management (Galkutė, 2006). The introduction of the dimensions of European education has become an important factor that has an influence on the process of education in the new economic,

social and cultural environment of European countries, and it is linked to the preparation of young people to live in a democratic, multicultural, multilingual Europe that will be increasingly more and more complex (Stobart, 1996). Thus, new challenges are posed to teacher training as well, targeted longitudinal scientific investigations are necessary in these areas. The role of the teacher has to be increasingly recognized, therefore, teacher training also has to become a priority in the politicians' eyes (Mokytojų rengimas inkliuziniam..., 2012).

Over the years, those who train pedagogues have tried numerous way in order to ensure quality teacher training and, most importantly, when solving the problem of long-term gap between the theory of teaching and the practice at schools (Zeichner, 2010). Over time, a few initial training models of pedagogues were commenced to use: the concurrent and the consecutive (Pagrindiniai duomenys apie..., 2013). Both teacher training models are provided by the Regulation on Teacher Training of Lithuania (Dėl pedagogų rengimo..., 2012). Lithuania's National Education Strategy for the period of 2013–2022 provides that pedagogical studies should combine wide humanitarian and thorough professional and practical pedagogical education in order that young teachers would feel competent enough to commence their independent work (Valstybinė švietimo strategija..., 2012). Which model of the ones provided in the the Regulation on Teacher Training of Lithuania – the consecutive or the concurrent – can esentially ensure the implementation of strategic targets for Lithuanian education? Which model has possibility to function reliably by joining in the whole of education system and creating conditions for better quality of teaching and learning?

The object of the research is the models of the consecutive and the concurrent teacher training.

The goal of the research is to analyze the tendencies of teacher training models in Lithuania and the world.

Methodology

The metods of the research: having performed the analysis of Lithuanian and foreign scientific literature, to analyze the models of the consecutive and the concurrent teacher training, their concept and teacher training tendencies, and problematics in Lithuania and the world have been discussed.

Results and discussion

The problematics of the consecutive and the concurrent teacher training. The advantages of the consecutive and the concurrent teacher training systems have been discussed by the global academic community for a long time, however, lately, a clear tendency has been noticed to extend the duration of the period of teacher training programs and raise the standards of teacher training in Europe (Ladd, 2007).

The most often emphasized advantage of the consecutive teacher training is that teachers are prepared in a shorter period of time, teacher training is facilitated, and the teacher shortage problem is solved faster (Consuegra, Engels, 2014). The economic question of teacher training is also discussed: one year (full-time studies) or one and a half years (part-time studies) pedagogical studies are cheaper. The consecutive model would also solve a teacher shortage faster which is revealed by the research on the age of teacher working in Europe: on average, one fifth of the teachers will reach retirement age in the next ten years (Mokytojo profesija Europoje..., 2002). In insights into Lithuanian education development, it is “that if conditions do not change, after 10-15 years, there even might be a teacher shortage: those around 1300-1500 new teachers who come in a year might be insufficient to substitute those in the teaching profession who leave due to reaching their retirement age.” The number of vouchers allocated by the state decreases every year. If preparation to become a teacher lasts five years and a student gains only one speciality, there will be an even greater shortage of teachers (Jackevičius, 2014). The decrease of teachers' workload also makes look at pedagogical studies in a different way. Lithuania's National Education Strategy for the period of 2013–2022 points out towards the encouragement to gain two - three pedagogical specialities in order that teachers would be able to reorientate easier and would be more mobile in the face of the decrease of workload (Valstybinė švietimo strategija..., 2012). However, studies of a few pedagogical specialities are possible only when learning in accordance with the concurrent model. Only the concurrent teacher training can also ensure

other teacher needs that are essential today: such as the knowledge of cultural diversity, international cooperation, and the understanding of international context, the knowledge of global ethics, and meet the teachers' need for acquiring interpersonal skills in order that they would be able to work with ethnic and linguistic minorities and children with special needs, and would be able to solve conflicts that arise in the classroom. One year consecutive studies to acquire these competencies are not enough, the question of the acquisition of key competencies listed in The Teacher Professional Competence List (Dėl mokytojo profesijos..., 2007) in such a short period of time is debatable as well.

The following advantages of the concurrent model of teacher training are distinguished in the scientific literature: professional interests are refined, the student discovers problems that are specific to teaching and learning, a better integration of academic and professional studies. From the very first year of studies, students take field placements at schools which enable to link theory and practice (Concurrent Education Program, 2014). A pedagogical field placement is one of the essential factors determining pedagogic professional self-determination of pedagogy students of technologies (Balčiūnaitė, 2006; Barkauskaitė, Pečiuliauskienė, 2007). The significance of a pedagogical field placement and the lengthening of its duration are also provided by the EU documents, recommendations are included to explore effective field placement models (e.g., more integrated than the consecutive ones, the development of key competencies using the spiral principle) and base them theoretically (Mokytojų rengimas inkliuziniam..., 2012). During their pedagogical field placement at school students assess their subject-related competencies, they check themselves in their work with pupils and after such experience often discover their calling, confirm their choice or even change their negative attitude not to work as a teacher. It is extremely important that students get acquaited with the work of the teacher gradually: at the beginning of studies, they observe, later, they work under the supervision of a mentor, and during the last year of studies, they lead lessons independently. The continuation of their field placement during the period of time allows for skills and values to form, there is sufficient time for reflection. Losing touch with his field placement does not provide an opportunity for a future teacher to mature as a personality. Students do not have an opportunity to acquire an in-depth knowledge of their professional environment and the relationship of their personality to it (Adamonienė, 2003). Without the knowledge of the laws or principles of the pedagogical process, psychological patterns, the pedagogue will work for some time intuitively: using trial and error method, a possibility arises for improper practical skills to form. Non-integrated stimuli get embedded in the profesional conscience and do not allow the pedagogue himself to perceive the essence of his professional pedagogic activity as a whole by confronting him all the time (Kregždė, 1998). The consecutive model for teacher training allows to to hastily acquire knowledge which in the modern learning paradigm does not create a precondition to become a real pedagogue. In the modern learning paradigm, the role of the teacher and the university teacher is different, it is “internationalization of values and the continuous improvement of its interaction with the educator” (Aramavičiūtė, 1998), it is cooperation, reflection, experience which is not acquired hastily.

An extremely important advantage of the concurrent study programmes of teacher training is the integrity of discipline and educology studies, the predominant interdisciplinary and cooperation view towards teaching and learning (Concurrent Teacher Education..., 2014,a,b). The integral learning of a discipline or the learning of a few diciplines at the same time with an iterative field placement and student's reflection creates conditions for the knowledge analysis and synthesis, ensures an opportunity to acquire proper skills of the work with pupils and allows a young teacher to avoid experimenting when already working at school, and the formation of erroneous skills. If the preparation of the pedagogue lasts for a year in isolation from his profession and pedagogical process, the student aquires only certain knowledge of pedagogy and psychology (abstractions). Scientists doubt whether students will be able to understand this knowledge as a system (Adamonienė, 2003).

Models of initial teacher training in Lithuania. Two models of initial teacher training are common in Lithuania: concurrent and consecutive. The concurrent model is the main one, when students get an individual subject training as well as pedagogical subjects and a certain amount of practical activity credits at school. The scope of the Bachelor’s degree curriculum is 240 ECTS credits (it includes pedagogical studies 60 ECTS module: 30 credits of pedagogy, didactics and psychology, and 30

credits of teacher field placement). Full-time studies take 4 years whereas part-time studies – 5 years. Qualification acquired: a bachelor's degree in certain subject and teacher's professional qualification.

The consecutive model of teacher training is relevant for those graduates that have a subject degree, but have no teacher qualification. The qualification is aquired in one year (60 ECTS), after studying 30 credits of pedagogogy, subject didactics, psychology and 30 credits of teacher training practice. Qualification acquired: teacher's professional qualification (Dėl pedagogų rengimo..., 2012).

The influence of teacher training models on the quality of pedagogical studies in the global context. In Ireland, teachers are trained in accordance with both the concurrent and consecutive models. Primary school teachers study their speciality in accordance with the concurrent model (4 years of studies, 240 ECTS), whereas future secondary school teachers acquire the right to work at school after one year of pedagogical studies in accordance with the consecutive model (60 ECTS). In 2012, in Ireland, the research was finished that had continued five years and examined five consecutive teacher training programs in Ireland. All the programs were aimed at preparing pedagogues that are able to teach 12-18-year-old pupils. When examining the programs, very many similarities were discovered in them: studies in pedagogy; the didactics of a taught subject, teaching practice and the like. In all the programs, there was a not shorter than 100 hours compulsory pedagogical field placement. 3720 graduates of consecutive programs of pedagogical studies took part in the research. Most of the respondents (63%) pointed out that the structure of their program should be restructured, because they were dissatisfied with their studies. The research revealed that non-integrated studies in pedagogy (the consecutive teacher training model) cause problems to students, especially to those who are not accustomed to such disciplines as psychology, sociology, philosophy and in the course of which, e.g., students have to write an essay as a report or the like (it is quite difficult for those who have completed studies in science). Most of the graduates who took part in the research maintained that they had encountered problems when they had to complete pedagogical field placement at school, because they had not been to schools since they had finished them and felt psychological discomfort and anxiety that they would have to return there. Most of them also pointed out that they had felt great stress at the beginning of their fiel placement, it was noticed that too much had been expected from young teachers. Most of the graduates pointed out that while completing their field placement at school and, having started to work pedagogical work, they had not felt properly prepared for it yet, because they had lacked classroom management skills, and problem solving skills. According to the graduates, it is impossible to prepare a real specialist during such a short time when there is a need to prepare the pedagogue or get retrained (Clarke, Lodge, 2012).

In almost all European countries, future teachers of pre-primary education and primary education levels are trained in accordance with the concurrent model. The only exceptions are France and Portugal: since 2011, only the consecutive model is used in these countries. In Bulgaria, both models are possible, however, most of future teachers study in accordance with the concurrent model. In Estonia, future teachers of primary education level (ISCED 1) can choose any of the models, however, most of future teachers study in accordance with the concurrent model. In Ireland, 1^{st}-6^{th} class teachers are trained in accordance with the concurrent model, whereas teachers of senior classes are prepared in accordance with the consecutive model, however, at the present time, there is already a discussion at all the levels in the country on the low preparation standard of teachers of senior classes to work with pupils, and it is thought that the teacher training from the first year of Bachelor's degree studies achieves better results. In Poland and Slovenia, future teachers of pre-primary education and primary education levels (ISCED 0-1) are trained only in accordance with the concurrent model. In the United Kingdom (England, Wales, Northern Ireland and Scotland), it is possible to study both in accordance with the concurrent and consecutive models (Pagrindiniai duomenys apie..., 2013).

The situation in the area of basic education is much more diverse. The concurrent model, as the only option to study, is used in Belgium, Denmark, Germany, Slovakia, Iceland and Turkey. In eight countries (Estonia, Spain, France, Italy, Cyprus, Luxemburg, Hungary and Portugal), the only possible model for the training of future pedagogues is the consecutive one. However, in the majority of the countries both models are applied (Pagrindiniai duomenys apie..., 2013).

When talking about the teacher training of secondary education level, in the majority of the countries, either only the consecutive model or both of the study models are offered. Thus, the majority of future European secondary school teachers study in accordance with the program of the consecutive model (Pagrindiniai duomenys apie..., 2013).

In Germany, Slovakia, Iceland and Turkey, the concurrent model is the only possible option when training future teachers of all the levels of education, whereas in France and Portugal only the consecutive model is applied. Conversely, in Bulgaria, Ireland, Poland and the United Kingdom, future pedagogues of all the levels – from the pre-school to the secondary education (ISCED 1–3) – can choose one or another model (Pagrindiniai duomenys apie..., 2013).

In Europe, Germany has got the longest, strictest and the least flexible teacher training programs. Basic teacher training takes about 5 years for primary school teachers and takes at least 6 years for secondary school teachers (Ladd, 2007). The first teaching phase takes 3-4 years for primary school teachers at universities and 5-6 years for secondary school teachers. Studies cover at least two subjects or the areas of two subjects, the learning of educology theory, psychology, sociology, and philosophy. During studies, students have to complete 3 months field placement at school. After successful graduation students can move towards the second phase of the preparation to become teachers which takes 1.5-2 years. At this stage, students work at schools at reduced salary and take part in various educational trainings all over the country. Fast acceptions to the second stage are not guaranteed, because it depends on the actual availability of jobs in the appropriate educational institutions. Having completed this stage, candidates take another State examination which consists of another written dissertation, oral examination and the assessment of classroom teaching. Only when the profession has been acquired the teacher is employed to work at school for a 2 years probationary period. Due to the fact that teaching is oriented according to separate levels (primary, basic, secondary) and types of school (secondary, vocational), it is not possible to move teachers from one level to another easily (Ladd, 2007; Teacher education in..., 2011). It has to be mentioned that a long and thorough teacher training in Germany is linked to big salaries of teachers, because such investments can be made only by the person who is really motivated to be come a teacher (Ladd, 2007).

In Finland, which is one of the leading countries according to the results of PIZA research, teacher training takes 5 years (3 years + 2 years), after these studies Master's degree is earned which is a necessary condition to become a secondary school teacher, whereas pre-school education pedagogues and primary school teachers only need to earn a Bachelor's degree. Primary school teachers go into educology, whereas future teachers of senior classes concentrate their attention on the subject-based studies, e.g., mathematics together with the didactics of the subject which encompass specific pedagogical knowledge of the studied subject. In Finland, there are no alternative ways to obtain a teacher's diploma: only a university diploma grants permission to teach. Since 1971, in this country, all the people who want to work as teachers need to have completed a university (Baskan, Yıldız, 2013). The goal of teacher training in the country is to seek equilibrium between personal and professional competencies of teachers. Particular attention is focused on the development of pedagogical thinking skills which would allow teachers to manage teaching process on the basis of the knowledge of modern education and practice. Study programs are mostly multidisciplinary which consist of at least 2 subjects (The Secret to..., 2010).

In Denmark, teacher training takes place by studying chosen studies of pedagogical trend. Studies of a chosen subject and a field placement make 180 credits. After such studies, there is an opportunity to choose Master's degree studies and choose a specialization (Undervisning og opbygning, 2014).

At Norwegian universities, a three or four years teacher training has been chosen. E.g., Oslo university offers 180 credits teacher training studies (Bachelor's degree studies and a one year field placement) and 240 credits teacher training studies (Bachelor's and Master's degrees studies). Norway University of Nordland is teacher training-oriented. It offers Bachelor's degree studies to train the teachers of 5-10 classes and Master's degree studies in a chosen pedagogical or subject area. Studies of a general nature are offered during the first two semesters, from the third semester, studies of a chosen specialization commence. There is an possibility to complete Bachelor's degree studies and acquire competencies that a teacher needs in order to teach various subjects (mathematics, languages,

geography etc.). It is possible to choose one dominant specialization and other peripheral specialializations: this possibility is especially attractive for students. Having graduated from a university, the student can teach different subjects in 5-10 classes. After Bachelor's degree studies, there are 2 years Master's degree studies with an in-depth focus on a specialization. In order to teach chosen subjects in senior classes, additional 60 credits for every subject have to be accumulated (subject and pedagogical field placement studies). 240 credits of pedagogical studies are also offered: so called profesional studies (a chosen pedagogical trend plus peripheral specialities and a field placement) (Ladd, 2007).

In France, those who desire to become a teacher have to tackle not only studies, but also big contests. In 1990, in France, teacher training institutes were founded in which pedagogues were prepared within two years (the second year is for an independent field placement). In 2005, those institutes were started to join to universiteties, whereas in 2008, pedagogical studies were started to integrate into Master's degree studies. In 2013, Higher teacher training schools were founded that belong to universities and the purpose of which is teacher training (Concours de recrutement..., 2014).

In Canada, the concurrent teacher training program takes 5 years and a double diploma is obtained, whereas the consecutive one takes 1 year. From 2015, the consecutive teacher training program will take 2 years (Concurrent Education Program..., 2014). In the United States of America, teachers are trained in accordance with the concurrent model. Students study integrated Bachelor's degree study programs for four years in which they receive both subject and professional training. It provides an opportunity to link theory and practice (Teacher Education Program.., 2014). In Belgium and Austria, it takes 3 years to train lower secondary level teachers, in Romania, it takes 3–4 years, depending on the subject that is taught at school (*Indicators on Initial..., 2009;* Staiculescu, Paduraru, 2013).

The duration of teacher training in Australia, Canada, England, and Korea is 4 years. In many other countries, the duration of teacher training differs, depending on the fact whether the goal is to become a primary school teacher or secondary school teacher. On the average, the duration of teacher training is 3.9 years for primary school teacher training, 4.4 years for lower secondary school teachers, and 4.9 years for upper secondary school teachers (Ladd, 2007).

No matter what country they would work, teachers are encouraged to work or study in other European countries for the sake of professional development. Mobility is the most important component of initial and continuous teacher training programs (Komisijos komunikatas Tarybai..., 2007). When given this opportunity, students can get acquainted with different education systems and cultures, analyze them and compare, develop their national identity, prepare for the development of the tolerance for pupils and prepare them for the challenges of globalization. Only by ensuring the international mobility of future and present pedagogues, we can lay the foundation for the the development of the further improvement of the education system and strengthen the European dimension.

Conclusions

1. In Europe, pedagogues are trained in accordance with both the consecutive and concurrent model, however, there is a noticeable trend to extend pedagogical studies and raise the standards of teacher training.
2. The concurrent teacher training model ensures the opportunity of the integration of the pedagogical field placement into studies when pedagogical experience, alternately with theory, while the student is reflecting, becomes pedagogical competencies, the student's personality matures.
3. Students who study pedagogical studies in accordance with the consecutive model have fewer opportunities to take part in mobility programs, develop cultural competency, prepare to work in the multicultural, multilingual and increasingly more and more complex Europe and learn to develop national self-awarenes of pupils and respect for other cultures.
4. The concurrent teacher training model ensures the conditions of the implementation of the modern learning paradigm when the role of the teacher and university teacher is changing, when learning is not only the transfer of knowledge, but cooperation, reflection, and experience which is not obtained hastily.

Bibliography

1. Adamonienė R. (2003). Profesijos pedagogų lygiagretaus rengimo modelis (Conccurent training model of vocational teachers). Acta Pedagogica Vilensia, Nr. 10, p. 22–28. (In Lithuanian)
2. Aramavičiūtė V. (1998). Ugdymo samprata: Mokomoji priemonė (The conception of education: Educational tool), Vilnius. (In Lithuanian)
3. Balčiūnaitė F. (2006). Būsimųjų psichologijos mokytojų profesinio kryptingumo ypatumai (Peculiarities of future psychology teacher professional development path). Pedagogika, vol. 81, p. 24–28. (In Lithuanian)
4. Barkauskaitė M., Pečiuliauskienė P. (2007). VPU studentų pedagoginių kompetencijų raiška švietimo kaitoje (VPU students' pedagogical competences expression of educational changes). Pedagogika, vol. 85, p. 43–52. (In Lithuanian)
5. Clarke M., Lodge A., Shevlin M. (2012). Evaluating initial teacher education programmes: Perspectives from the Republic of Ireland. Teaching and Teacher Education, 28, p. 141–153.
6. Cole K. (2010). Management: theory and practice. Frenchs Forest, Pearson Sydney, Australia, p.582.
7. Concours de recrutement de professeur des écoles (2014). (Teacher recruitment exam schools) [online]. Available at http://fr.wikipedia.org/wiki/Concours_de_recrutement_de_professeur_des_%C3%A9coles (In French)
8. Concurrent Education Program (2014). From: Queen's University Faculty of Education. [online]. Available at http://www.queensu.ca/calendars/education/Concurrent_Education_Program.html
9. Concurrent Teacher Education Program (2014a). From: Career Bear [online]. Available at http://careerbear.com/teacher/program/concurrent-teacher-education-program
10. Concurrent Teacher Education Program (2014b). From: Victoria College University of Toronto [online]. Available at http://www.vic.utoronto.ca/students/academics/education/ctep.htm
11. Consuegra E., Engels N., Struyven K. (2014). Beginning teachers' experience of the workplace learning environment in alternative teacher certification programs: A mixed methods approach. Teaching and Teacher Education, 42, p. 79-88.
12. Darling-Hammond L. (2005). Does teacher preparation matter? Evidence about teacher certification, teach for America, and teacher effectiveness. Education Policy Analysis Archives, 13(42) p. 16 - 20.
13. Dėl mokytojo profesijos kompetencijos aprašo patvirtinimo (2007). (Approval of the description of teaching profession competencies). Lietuvos Respublikos Švietimo ir mokslo ministro 2007 m. sausio 15 d. įsakymas Nr. ISAK-54 // Valstybės žinios. 2007, Nr. 12-511 (Republic of Lithuania, Order of the Minister of Education in 2007, 15 January. No. ISAK-54 „“). (In Lithuanian)
14. Dėl pedagogų rengimo reglamento patvirtinimo pakeitimo (2012). (On Approval of the Regulation of teacher training replacement). Lietuvos Respublikos Švietimo ir mokslo ministro 2012 m. gruodžio 12 d. įsakymas V-1742 „Dėl švietimo ir mokslo ministro 2010 m. sausio 8 d. įsakymo Nr. V-54 // Valstybės žinios. 2012, Nr. 149-7654. (Republic of Lithuania, Order of the Minister of Education in 2012, 12 December. No. V-1742 „For the Minister of Education in 2010, 8 January, Order No. V-54). (In Lithuanian)
15. DuBrin A. J. (2011). Impression management in the workplace : research, theory and practice, London, Routledge, Taylor & Francis Group.
16. Galkutė L. (2006). School agenda 21: a pilot project in education for sustainable development. From: Changing Education in a Changing Society. Spring University, 1, p. 51-55.
17. Baskan G.A., Yıldız E.P., Tok G. (2013). Teacher training system in Finland and comparisans related to Turkey: 2nd World Conference on Educational Technology Researches – WCETR2012. Procedia - Social and Behavioral Sciences, July, Vol. 83, 4, p. 1073-1076.
18. Indicators on Initial Teacher Education - extracted from Key Data on Education (2009). EURYDICE, Education, Audiovisual and Culture Executive Agency, Belgium. [online]. Available at http://www.sdcentras.lt/pla/res/Indicators%20on%20Initial%20Teacher%20Education.pdf
19. Jackevičius M. (2014). Priėjome liepto galą: mokytojų tuoj reikės atsivežti iš Rusijos (We have reached the end of their tether: Teachers immediately need to be brought from Russia). From: DELFI [online]. Available at http://www.delfi.lt/news/daily/education/priejome-liepto-gala-mokytoju-tuoj-reikes-atsivezti-is-rusijos.d?id=64074998#ixzz3B0bkz2Q9 (In Lithuanian)
20. Komisijos komunikatas Tarybai ir Europos parlamentui. Dėl mokytojų rengimo kokybės gerinimo (2007). (Communication from the Commission to the Council and the European Parliament. For improving the quality of teacher education). Europos bendrijų komisija. Briuselis, 15 p. [online]. Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0392:FIN:LT:PDF (In Lithuanian)

21. Kregždė S. (1998). Mokytojo kaip profesionalo formavimosi psichologija (The formation psychology of teacher as a professional). Ugdymo psichologija, No. 1(1). (In Lithuanian)
22. Ladd H. F. (2007). Teacher Labor Markets in Developed Countries. Excellence in the Classroom, Vol. 17, No 1, p. 201–217.
23. Mokytojo profesija Europoje: bendras apibūdinimas, tendencijos ir problemos (The teaching profession in Europe: Profile, trends and concerns) (2002). Pagrindinės Europos švietimo temos 3 TOMAS. Eurydice, Europos sąjungos Švietimo ir kultūros generalinis direktoratas (Key topics in education VOLUME 3. Eurydice, the European Union Education and Culture DG), p. 121. (In Lithuanian)
24. Mokytojų rengimas inkliuziniam švietimui Europoje: Inkliuzinio švietimo mokytojo profilis (2012). (Training of teachers for inclusive education in Europe: Inclusive education teacher profile). Europos specialiojo ugdymo plėtros agentūra (European Agency for Development in Special Needs Education. [online]. Available at http://www.european-agency.org/sites/default/files/te4i-profile-of-inclusive-teachers_Profile-of-Inclusive-Teachers-LT.pdf (In Lithuanian)
25. Notices from European Union institutions, bodies, offices and agencies (2013). Council Conclusions on investing in education and training — a response to 'Rethinking Education: Investing in skills for better socio-economic outcomes' and the '2013 Annual Growth Survey' [online]. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:064:0005:0008:EN:PDF
26. Teacher Education Program (2014). From: Seaver College, Pepperdine University [online]. Available at http://seaver.pepperdine.edu/humanities/undergraduate/teachereducation/
27. Pagrindiniai duomenys apie Europos mokytojus ir mokyklų vadovus. Eurydice ataskaita (2013). (Basic data about the teachers and school leaders. Eurydice report). [online]. Available at http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/151LT.pdf (In Lithuanian)
28. Rivkin S. G., Hanushek E. A., Kain J. F. (2005). Teachers, Schools, and Academic Achievement. Econometrica, Vol. 73, No 2, p. 417-458.
29. Staiculescu C., Paduraru M. E. (2013). Initial teacher training in Romania - a critical view. 5th International Conference EDU-WORLD 2012 - Education Facing Contemporary World Issues. Procedia - Social and Behavioral Sciences, 76, p. 780–784.
30. Stobart M. (1996). The european Dimension of Secondary Education: Challenges and Opportunities – a Council of Europe Perspektive. Internationale Schulbuchforschung. Franfurkt: Diesterweg, p. 11–21.
31. Subotkevičienė R. (2008). Mokytojų rengimo tendencijų įvairovė (Trends in a variety of teacher training). Pedagogika, Vol. 90. p. 6–43. (In Lithuanian)
32. Teacher education in United Kingdom and Germany (2011). [online]. Available at https://www.sprachenzentrum.hu-berlin.de/studium_und_lehre/studentische_beitraege/education_in_britain_and_germany/katja1.html
33. The Secret to Finland's Success: Educating Teachers (2010). Stanford Center for Opportunity Policy in Education [online]. Available at https://edpolicy.stanford.edu/sites/default/files/publications/secret-finland%E2%80%99s-success-educating-teachers.pdf
34. Undervisning og opbygning (2014). (Education and building). Københavens Universitet. [online]. Available at http://studier.ku.dk/bachelor/paedagogik/undervisning-og-opbygning/ (In Dannish)
35. Valstybinė švietimo strategija 2013–2022 m.: tikslai, problemos, tobulinimo kryptys (2012). (The National Education Strategy for the period 2013-2022: goals, problems, improvement directions). Švietimo problemos analizė, october No. 17 (81). (In Lithuanian)
36. Zeichner K. M. (2010). Rethinking the connections between campus courses and field experiences in college - and university-based teacher education. Journal of Teacher Education, 61(1–2), p. 89–99.

Psychology

Medical Personnel Job Satisfaction, Subjective and Psychological Well-being.

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Abstract: The study of job satisfaction was commenced at the first half of 20th century initially to improve work performance. The results of the scientific research show that a satisfied worker displays better ability to work, is disposed positive, less suffers from any disease and less delays performance of job; all this has effect on the capacity to organize oneself and consequently, to be a success in making profit and displaying capability. The goal of this scientific study is to find out the interrelation between job satisfaction, subjective and psychological well-being of Medical personnel. To answer the following questions raised at the research: what is the personnel' job satisfaction or whether there is the interrelation between the job satisfaction and the subjective well-being and what kind of or whether there is the interrelation between the job satisfaction and the psychological well-being and what kind of. Data abstraction was used: subjective well-being research survey "Satisfaction with Life Scale", "Psychological Well-being Scale" and "Job Satisfaction questionnaire". The study results allow make the conclusion that there is the interrelation between job satisfaction and psychological well-being, which shows a particular correlation scale of the subjective and psychological well-being, but there is no interrelation between the subjective well-being and job satisfaction. The results show medical personnel dissatisfaction with pay and other remuneration, job evaluation, the system of motivation and internal communication.

Keywords: adult education, job satisfaction, subjective, psychological well-being.

Introduction

The social life of an individual consists of various areas, such as family, job. They spend considerable time at work, and it is therefore important for the individual to feel good, positive and, the refore, satisfied at it.

A satisfied employee can do their job more efficiently, and this, in its turn, influences the quality of the services provided and the profit earned by the organisation. A satisfied employee can do much more and work more efficiently, satisfaction improves performance (Spector, 1996).

Doctors most directly face and experience the impacts of the economic situation in the state, the major outflow of medical personnel to other countries for better income, the overall negative attitudes of people, which affect their outlook on life and job, and their well-being.

The aim of the paper is to study the satisfaction of doctors with their job, Subjective and Psychological Well-being, and their interrelations.

The concept of well-being is based on two different paradigms which, however, overlap. The first of them is hedonism (Kahneman, 1999 cited by Ryan, Deci, 2001, 143) which represents the opinion that well-being consists of joy or happiness. The second one is eudemonism which represents the opinion that well-being consists not only of happiness alone, but also of the potential of the individual (Waterman, 1993). Most of the research in the hedonic approach in psychology uses evaluation of subjective well-being (Riga International School of Economics and Business Administration, Suh, 1999).

There is a view on the theory of eudemonism that not all wishes, not all results an individual might assess or achieve will provide sense of well-being. From the point of view of eudemonism, subjective happiness cannot equal well-being (Ryan, Deci, 2001). Carol Ryff and Corey L.M. Keyes (Ryff, Keyes, 1995) speak about psychological well-being (PWB), which is different from subjective well-being (SWB), and introduce a multi-dimensional approach.

P.L. Spector (Spector, 1996) claims that job satisfaction reflects how people feel with regard to their jobs in general and also speak about various aspects of it. The aspects approach focuses on the aspects

of a job, such as payment (salaries, allowances), other people at work (supervisors or colleagues), working conditions and nature of work (Spector, 1996).

Several studies to investigate life satisfaction in relation to job satisfaction demonstrated that these variables correlate with each other (Judge, Watanabe, 1993; Lance, 1989; Weaver, 1978, cited by Spector, 1996, 235). In their 5-year research study, T.A. Judge and S. Watanabe (Judge, Watanabe, 1993 cited by Spector, 1996, 235) confirmed the statement that job satisfaction is closely related with life satisfaction and vice versa.

Methodology

To find out the satisfaction of doctors with life and their job, the authors of the paper studied the subjective well-being of doctors, as well as their job satisfaction.

In 2014, the authors conducted a research study in which they used 3 surveys;

The Life Satisfaction Scale - (Diener, Emmons, 1985). The tool has been created to be able to measure the overall assessment of their life expressed by an individual. The scale includes five statements which the respondents need to provide their replies to by giving 1 to 7 points to each of them. The scores are then summed up, and the result shows the degree of life satisfaction of the respondent.

Psychological Well-being Survey - (Ryff, 1989) - (adapted by Voitkāne, Miezīte, 2001). The Psychological Well-being Survey consists of six scales: Self acceptance, Positive relationships, Autonomy, Environmental Mastery, Purpose in life, Personal growth. The Psychological Well-being Survey consists of 54 statements for which the respondents need to provide their responses by rating the degree of their agreement with the statement on a scale of 1 to 6.

Job Satisfaction Survey - (Spector, 1985) - (adapted by I. Burvis, 2005). The survey consists of 36 statements, divided into 9 aspect scales of 4 statements each.

The SPSS programm, Pearson Correlation Coefficient are used to process the results. The sample consists of 70 respondents (doctors) from Riga, who work in healthcare institutions.

Results and discussion

The Life Satisfaction Scale developed by E. Diener et. al. (Diener, Emmons, 1985) determines the overall life satisfaction of people (subjective well-being), how they assess and view their lives themselves.

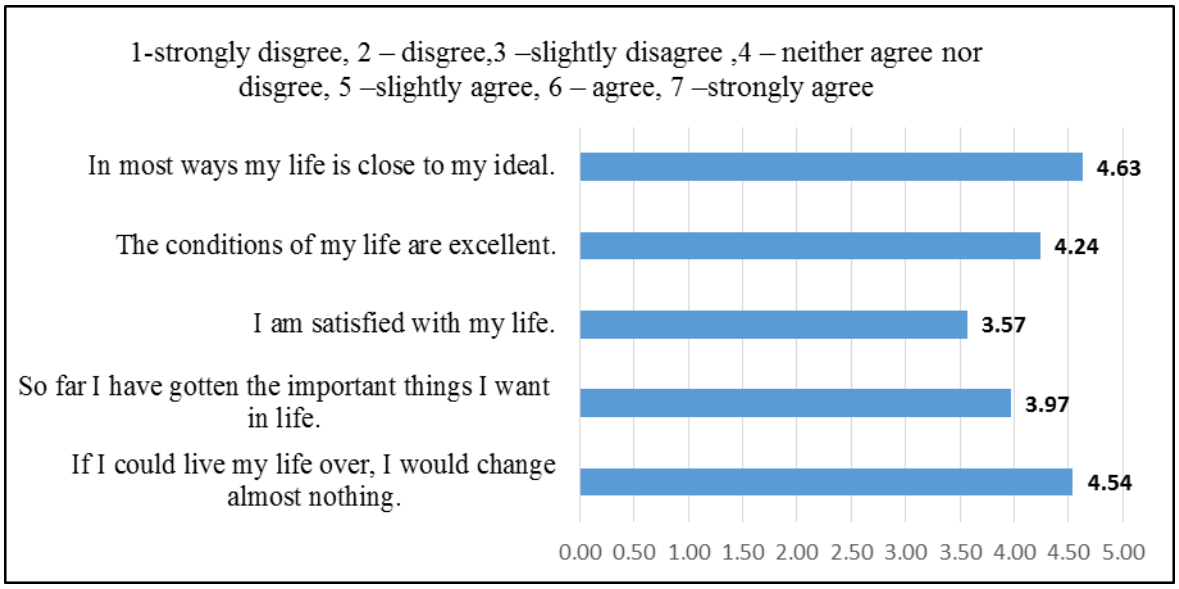

Figure 1.The median values of the results of the respondents of the Life Satisfaction Scale by E. Diener.

The respondents do not give conclusive responses. One can observe a tendency not to agree with the statements rather than agree with them, and this is suggestive of doubts regarding their life satisfaction among the personnel (Figure 1).

The Scale of Psychological Well-being (SPWB) created by C. Ryff (Ryff, 1989) helps understand the aspects of the psychological well-being of the respondents. These are divided into six dimensions to reflect the overall psychological well-being in more detail (Figure 2).

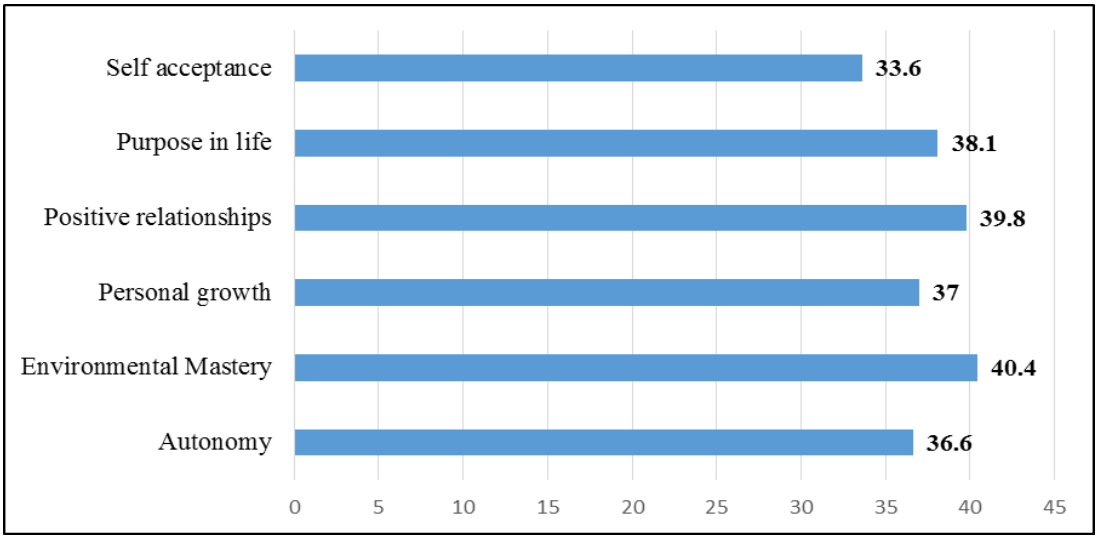

Figure 2.Distribution of the mean values of the results of the Scale of Psychological Well-being by C.Ryff by the scales of the survey.

Overall, the median of the results of the respondents is equal on all scales. The respondents show higher results on the ability to adapt to the environment and the society, and the results are also higher on the scale of mutual relationships. The results can be explained by the specifics of a medical institution, i.e., doctors must be able to adapt to the society and the environment.

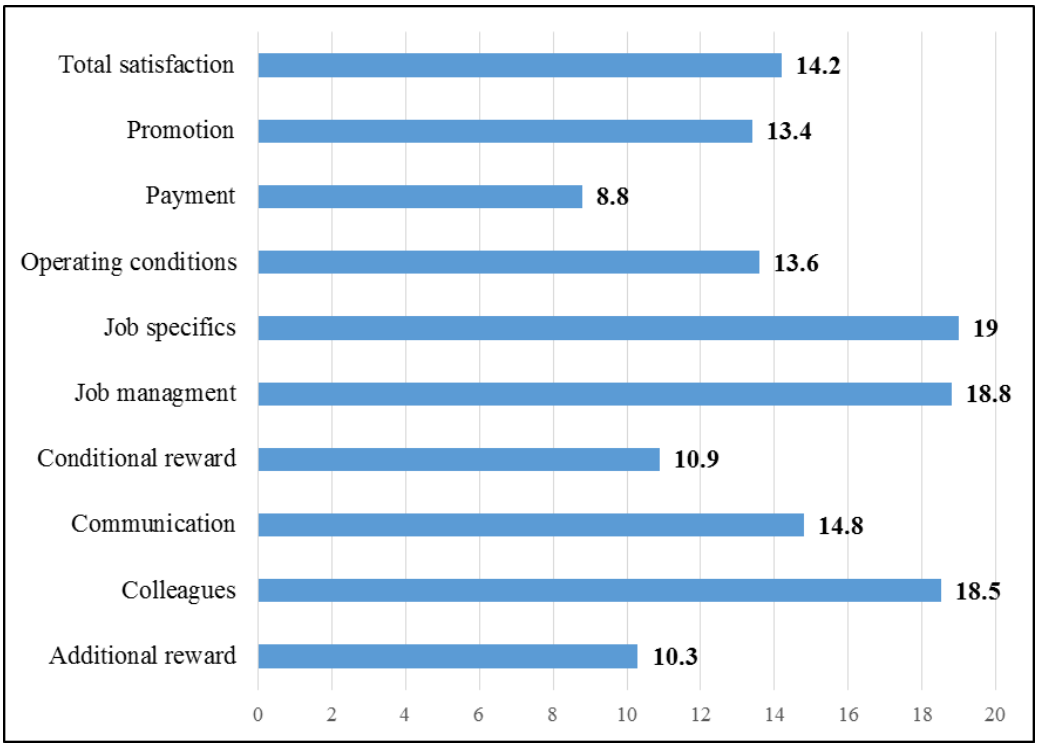

Figure 3.P.E. Distribution of the median values of the results of the Job Satisfaction Survey by P.Spector the scales of the survey.

The median values of the results on the job satisfaction scales shown in the figure demonstrate the scales, or the areas, doctors are most or less satisfied with (Figure 3).

The results show that doctors are more satisfied with such areas of their job as the job specifics, or with certain tasks in their work, the co-workers, the colleagues they work with, job management, and they are satisfied with their direct supervisor. There is a drastic difference in the results regarding the reward (both conditional and principal), and the payment. According to all three payment-related scales, doctors are least satisfied with this area.

Table 1

Reflection of the statistically significant correlations between the survey scales by P.E.Spector and C.Ryff P.E.Spector and C.Ryff

Scales of Psychological Well-being by C. Ryff							
P.E. Job Satisfaction Survey (JSS) by Spector			Posit. relation ships	Autonomy	Ability to adapt to environme nt and society	Feeling the aim in life	Self-acceptance
	Payment	Pearson Correlation	-,359**	-,392**	-,234	-,236*	-,210
		Sig. (2-tailed)	,002	,001	,052	,049	,081
	Job management	Pearson Correlation	,254*	-,004	,212	,316**	-,035
		Sig. (2-tailed)	,034	,974	,078	,008	,776
	Additional reward	Pearson Correlation	-,363**	-,325**	-,268*	-,215	-,174
		Sig. (2-tailed)	,002	,006	,025	,074	,151
	Conditional reward	Pearson Correlation	-,304*	-,223	-,206	-,030	-,168
		Sig. (2-tailed)	,011	,063	,087	,807	,165
	Colleagues	Pearson Correlation	,255*	-,002	,328**	,194	-,044
		Sig. (2-tailed)	,033	,984	,006	,107	,715
	Job specifics	Pearson Correlation	,291*	,098	,305*	,265*	,127
		Sig. (2-tailed)	,014	,420	,010	,027	,295
	Communication	Pearson Correlation	,089	,252*	,204	,210	,269*
		Sig. (2-tailed)	,464	,035	,091	,081	,024

There is a medium close, inverse correlation between the scales of payment and positive relationships (r= -0,359, p<0,01), i.e., an increase in the remuneration the doctors receive results in less positive relationships or worsens the mutual relations within the team. There is a medium close, inverse correlation between the scales of payment and autonomy (r= -0,392, p<0,01), i.e., an increase in the remuneration the personnel receive results in less sense of independence and less ability to stand against the action models and ways of thinking dictated by the society. There is a medium close, direct correlation between the scales of job management and positive relationships(r=0,254, p<0,01), i.e. better satisfaction with job management or the direct supervisor results in more positive relationships (Table 1).

There is a medium close, inverse correlation between the scales of additional reward and positive relationships (r=-0,363, p<0,01) i.e., increases in the tangible and intangible rewards results in less positive or worse mutual relationships within the team. There is a medium close, inverse correlation

between the scales of additional rewards and autonomy (r= - 0, 325, p<0,01) i.e., increases in the tangible or intangible rewards result in less autonomy and sense of independence in the employees. There is a medium close, direct correlation between the scales of job specifics and positive relationships(r=0,291, p<0,01) i.e., better satisfaction with various specific assignments at work results in more positive relationships between the personnel members. There is medium close, direct correlation between the scales of communication and autonomy (r=0,252 p<0,01) i.e., improvements in the communication within the organisation result in more autonomy, self-dependency, and sense of independence in the personnel.

When looking at the results of the correlations between the Job Satisfaction Survey by P. E. Spector, the Life Satisfaction Scale by E. Diener, the authors found no statistically significant correlations between them.

Table 2

Reflection of the statistically significant correlations between the survey scales by E. Diener and C. Ryff

		Personal growth	**Feeling the aim in life**
The Life Satisfaction Scale by E. Diener	Pearson Correlation	,252*	,294*
	Sig. (2-tailed)	,035	,013

There is a medium close, direct correlation between the scale of life satisfaction and the scale of personality growth (r=0,252, p<0,01) i.e., higher levels of life satisfaction result in more sense of personal growth (sense of continuous development, growth, increased potential). There is a medium close, direct correlation between the scale of life satisfaction and feeling of aim in life (r=0,294,p<0,01) i.e., higher levels of overall life satisfaction result in better feeling of aim in life and sense of the path to follow (Table 2).

Conclusions

The overall result of the Life Satisfaction Survey shows that most doctors have neutral levels of life satisfaction, which means there is no extreme satisfaction or extreme dissatisfaction with life. The results of the Scales of Psychological Well-being show that the respondents have higher scores for the ability to adapt to the environment and the society, and on the scale of mutual relationships, whereas the lowest scores are on the scale of self-acceptance. This means that the respondents demonstrate lower scores for positive attitudes towards themselves, are not satisfied with their past and wish to be different. The results of the Job Satisfaction Survey show that the respondents in the survey are more satisfied with such areas of their job as the job specifics, or with certain tasks in their work, the co-workers, the colleagues they work with, and job management, and they are satisfied with their direct supervisor. There are drastic differences in the results regarding the reward (both conditional and principal), and the payment. According to all three payment-related scales, doctors are least satisfied with this area. There is a medium close, inverse correlation between job satisfaction and psychological well-being, between the scales of payment and mutual relationships, and between the scales of payments and autonomy. There is a medium close, direct correlation between the scales of job management and positive relationships. There is a medium close, inverse correlation between the scales of additional rewards and ability to adapt to the society and the environment, between the scales of conditional reward and positive relationships. This means that increased levels of recognition and appreciation results in poorer mutual relationships within the team. There are also medium close correlation between the other scales. There is a medium close, direct correlation between subjective and psychological well-being, between the scales of life satisfaction and personal growth, i.e., higher levels of overall life satisfaction result in higher levels of the sense of personal growth (feeling of continuous development, growth, increased potential); there is also a medium close, direct relationship between life satisfaction and aim in life, i.e., higher levels of life satisfaction result in higher levels of feeling the aim in life and the line to follow. Having reviewed the overall results, the authors of the

paper believe that doctors are satisfied with their job, but, nevertheless, there are certain areas, such as payment, incentives for the employees, internal communication, which the Human Resources should improve.

Bibliography

1. Burvis I. (2005). Apmierinātības ar darbu aptaujas adaptācija. [online] [22.12.2014]. Available at http://www.atlants.lv/konspekts/apmierinatibas-ar-darbuaptaujas-adaptacija/886659/
2. Diener E., Suh E. M., Lucas R. E. and Smith, H. L. (1999). Subjective well-being: Three decades of progress, *Psychological Bulletin*, 125(2), pp. 276-302.
3. Diener E., Emmons R. A., Larsen R. J. & Griffin S. (1985). The Satisfaction with Life Scale, *Journal of Personality Assessment*, 49, pp.71-75.
4. Judge T.A., Wantanabe S. (1993). Another look at the Job Satisfaction- life Satisfaction relationship. Journal of Applied Psychology 1993, Vol. 78 (6), pp. 939-948. [online] [22.12.2014]. Available at http://www.timothy-judge.com/Judge%20%26%20Watanabe%20JAP%201993.pdf
5. Kahneman D. Diener E, (1999). Well-Being: The Foundations of Hedonic Psychology. Schwarz N. (Eds). New York, Russell Sage Foundation, pp. 2-25
6. Ryan R.M., Deci E.L. (2001). On Happiness and Human potenatials: A Review of Research on Hedonic and Eudaimonic Well-Being, *Annual Rewiev of Psychology*, 52, pp. 141-166.
7. Ryff C.D., Keyes C.L.M. (1995). The structure of psychological well-being revisited, *Journal of Personality and Social Psychology*, 69(4), pp.719-727.
8. Ryff C.D. (1989). Happiness Is Everything, or Is It? Explorations on the Meaning of Psychological Well-Being, *Journal of Personality and Social Psychology*, 57(6), pp.1069-1081.
9. Spector P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey, *American Journal of Community Psychology*, 13, pp. 693-713.
10. Spector P.L. (1996). *Industrial and organizational psychology: research and practice*. John Wiley & Sons.
11. Voitkāne S., Miezīte S. (2001). Pirmā kursa studentu adaptācijas problēmas (Adaptation Problems among First-Semester University Students), Journal of Baltic Psychology, Vol. 2, Nr.1, 43.-53. lpp. (In Latvian).
12. Waterman A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment, *Journal of Personality and Social Psychology*, 64, pp. 678-691.
13. Weaver C.N. (1978). Job satisfaction as a component of happiness among males and females. Personnel Psychology, Vol. 31(4), pp. 831-840. [online] [22.12.2014]. Available at http://www.readcube.com/articles/10.1111%2Fj.1744-6570.1978.tb02126.x?r3_referer=wol&tracking_action=preview_click&show_checkout=1&purchase_referrer=onlinelibrary.wiley.com&purchase_site_license=LICENSE_DENIED_NO_CUSTOMER

Psychological Aspects of Non-Observance of Work and Civil Safety Regulations

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Abstract: It has been found out in the authors' previous reserch that the respondents range health as a value in first place. However, the life skills of the learners and the employees working in the institutions and organisations in many cases do not ensure the observance of work and civil safety regulations, particularly among younger people. The aim of the study was to investigate the psychological aspects of non-observance of work and civil safety regulations. The methodologies used in the research were semi-structured interviews and discussions about the possible psychological causes of non-observance of work and civil safety regulations and the ways of decreasing the negative impact of these causes. The respondents were the participants of a civil safety seminar. The respondents' opinions - the main causes of formal attitude toward work and civil protection are the following: a) the mutual influence of society members' actions (86%); b) low self-esteem and the inability to see oneself as a value. The main solution to minimise the formation of formal attitude is to improve the study process (78%).

Keywords: adult education, civil safety,work safety,values, life skills, specialists.

Introduction

People's lives and health depend directly on observing definite safety and protection regulations in all spheres of life: at the workplace, in the family, in educational institutions, in formal and informal groups, or individually being engaged in hobbies (sports, ice fishing, etc), and engagement in active or passive recreation (swimming, sunbathing, etc.). Almost every day the mass media in Latvia report about different kinds of dramatic or tragic incidences where people have been killed, become disabled, or have had health problems affecting their ability to work. A considerable amount of resources are spent for rescuing and saving the lives of those who do not observe the regulations, and at this time the professionals taking part in the rescue operations not only risk, but sometimes also lose their lives.

Road accidents can be mentioned as one of the most typical examples having an upward trend:

there were 166 people killed in reported road accidents over an 11-month period in the year 2013 which is by 8 (or 5.1%) fatalities more compared to the same period in 2012. The number of road casualties was 3220 (by 71 people or 2.3% more compared to the 11-month period in 2012) (Ceļu satiksmes.., 2013). The most typical causes: inappropriate speed and drunk driving.

The conditions mentioned above form a context where personnel's work and civil safety activities take place in institutions and enterprises. This context influences people's experience from the very onset of childhood and as a result of this experience life skills are developed. Thus the solution of psychological problems of work and civil safety in institutions and enterprises are closely connected with the solution of these problems in the entire society from early childhood. One of the ways to deal with the problem is the implementation and improvement of life skills education. It had been studied already in the last quarter of the 20th century and is continuing within the framework of *Education for Sustainable Development*.Life skills education has been characterized in several United Nations Organizations'(United Nations Children's Fund; World Health Organization) documents (UNICEF, 2000; Life Skills…, 1997; Partners in Life..., 1999) which contain the definitions and characterization of the concepts *life skills* and *life skills education.*

The term "life skills" is open to wide interpretation. The United Nations Inter-Agency Meeting participants have agreed on "...a consensus that all participants were using the term to refer to psychosocial skills. The keywords used to describe psychosocial skills were: personal, social, interpersonal, cognitive, affective, universal." (Partners in Life..., 1999, 3).
The United Nations International Children's Fund defines life skills as follows:"Life Skills are psycho-social and interpersonal skills used in every day interactions and are not specific to getting a job or

earning income." (UNICEF, 2000, 29). The World Health Organization describes life skills as "abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life." (Life Skills…, 1997, 1).
With the help of life skills an individual can increase the control not only over his/her health but also over life in general.

„Life skills education is designed to facilitate the practice and reinforcement of psychosocial skills in a culturally and developmentally appropriate way; it contributes to the promotion of personal and social development, the prevention of health and social problems, and the protection of human rights." (Partners in Life..., 1999).

It is very important to note that life skills education includes not only giving information but also developing the abilities to adequately use the obtained knowledge in practice. "Life skills enable individuals to translate knowledge, attitude and values into actual abilities *what to do and how to do it*." (Life Skills…, 1997, 4) The quoted UNO documents pertain mainly to children's and teenagers' education both in the educational institutions and outside of them. However, it has been indicated that life skills education can be acquired in adult learning as well (Life Skills…, 1997, 6).

Life skills are significantly influenced by the attitudes and values which the authors have investigated before in the context of work safety (Brizga, Pēks, 2014; Brizga, Ozoliņa, Pēks, 2014). It has been found out in the research that the respondents range health as a value in first place. The significance of values in adults is different in different levels of maturity (Brizga, Ozoliņa, Pēks 2014).

Taking into consideration the increase in the popularity of computers and the time spent at computers, both at work and in everyday life, the observance of ergonomics of computer use has been studied (Brizga, Pēks, 2014). When carrying out self-evaluation of the knowledge on computer use ergonomics, 72% of respondents admitted that the knowledge was sufficient. However, 88% of respondents do not observe the regulations regarding work at the computer to protect their health. As a result, 95% of them (124) felt changes in health or their symptoms (Brizga, Pēks, Bērtaitis, 2013).

As it can be seen, there is a contradiction between acknowledging health as a value and observance of the regulations to save it. Life skills in many cases do not ensure the observance of health safety regulations. Therefore the research on the relations of attitude and values with work and civil safety is topical.

Methodology

The methods used in the research were semi-structured interviews and discussions conducted within the framework of the *Aware & Resilient project* (Co-ordinated by the *Austrian Red Cross*) during the training seminar of *Latvian Red Cross*. The seminar took place in September 2014 at the municipal educational institution of Jelgava city *Zemgale Region Human Resource and Competences Development Centre* (ZRHRCDC). The aim of the Centre is to offer and provide lifelong education for each inhabitant of Jelgava city and Zemgale region. The overall aim of the Aware & Resilient project is to raise the awareness of younger citizens of the value and benefits of disaster preparedness, in addition to creating community links. The participants of the seminar were the representatives of the personnel involved in the implementation of work and/or civil safety in institutions or enterprises. The main questions of the research: What causes determine the formation of formal attitude toward work and civil safety? How to minimise the formation of formal attitude toward work and civil safety? The respondents of the semi structured interview were 49 participants of the seminar (57% female and 43% male participants). A part of respondents (16) sent their opinions after the seminar by email. The round table discussions took place in practical class groups. Informal discussions continued during coffee breaks and lunch time. The number of participants in these discussions was 102. At the end of the seminar the participants also evaluated the overall process of the seminar and results – changes in the disaster preparedness. The average evaluation in a five score system was four (the results of the survey conducted by the organisers of the seminar, which characterise also the quality of the data obtained from the research).

Results and discussion

Respondents consider that the work and civil safety fields are quite different. However, the opinions regarding people's attitude toward learning/studies in these fields and the use of this knowledge, skills and competences are similar. This is influenced by several stereotypes of the past. The most significant of them are: a) learning/studies and their results do not provide immediate benefits for the inhabitants and are not connected with everyday situations (the inhabitants ignore the fact that timely discovered acute occupational disease and adequate prevention of harmful work factors can protect people from more serious health problems); b) work and civil safety deal with large scale problems which inhabitants will never have to face (the people of our country also face the risks of epidemics, terror acts, military invasions, floods and fire outbreaks, and recently these risks have become more topical both in this country and on an international scale.

Table 1

Causes of formal attitude formation toward work and civil safety and solutions

The results of the semi-structured interviews

Questions	Respondents' Opinions	Total	%
What causes determine the formation of formal attitude toward work and civil safety?	People's low self-esteem, they do not consider themselves as a value.	36	74
	Influence of society members' mutual action	42	86
	It is difficult to change habits	10	20
How to minimize the formation of formal attitude toward work and civil safety?	It is necessary to improve learning/studies of work and civil safety.	38	78
	Higher fines, because material values influence human behaviour	6	12
	It is difficult to answer, since people are not sufficiently informed about the factors of minimizing the non-observance of regulations	5	10

Semi-structured interviews. It was found out (Table 1) from semi-structured interviews that the formation of formal attitude toward work and civil safety is mainly formed by:

- influence of society members' mutual action (86%)
- people's low self-esteem, they do not consider themselves as a value (74%).

The differences between these factors are not statistically significant – $p = 0.50$ (Preacher, 2001). The factor *it is difficult to change habits* (20%) is relatively less significant. Its difference from the two previous factors are obviously statistically significant. A small portion of respondents (12%) think that the solution to the observance of regulations could be higher fines since material values influence people's behaviour.

A part of respondents (20%) acknowledged that people are accustomed to ignoring regulations and it is difficult to change these habits. People become aware of the risks only after the recurrence of an accident or trauma. Oftentimes when economizing on several minutes, much more time is lost on recovery. Responding to the question – what to do to minimize the non-observance of regulations in society, 10% of respondents indicated that it was difficult to answer because people are not sufficiently informed about the factors of minimizing the non-observance of regulations. It can be related to insufficient life skills.

When the results of the interviews were discussed, the participants characterised the influence of the mutual behaviour of society's members with typical incidences. For instance, if a pedestrian crosses the street on an inappropriate traffic light signal, most of the people will do the same. All the participants agreed to the oppinion: "most likely nothing bad will happen to me", but unfortunatelyaccidents happen, and the number of casualties is increasing (see Introduction).

People's low self-confidence and incapability to consider themselves as a value are influenced by several factors. The researcher of Michigan university Neil Carter classifies values as follows:

- instrumental value – the object serves as a means for realising somebody's wishes, for example – nature serves people.
- inherent value - somebody has acknowledged this value, but it is not the means to realise somebody's wishes, it is a value by itself;
- intrinsic value – the value exists by itself, irrespective of whether acknowledged or not.

The cognizance of a human as a real value is negatively influenced by more and more often found word collocations – *human factor, human potential* and *human resources* (Hentig, 1999). Human dignity and honour are not disputable. A human is not an object, but a subject and human's life and health are the highest basic values (Hentig, 1999). Anthropocentrism is based on the viewpoint that it is exclusively a human who has an intrinsic value, nature serves people to provide them well-being and satisfaction (of) humans' needs. In ecocentrism a human as a value is equal to other beings. Anthropocentrism can manifest itself in a lighter and stronger degree. Humans' refusal of satisfying their needs while preserving living species is a lighter degree of manifistation of anthropocentrism (Carter, 2007). In order to save themslves as a value humans must believe in the results of their behaviour and attitude toward health as ensurer of life expectancy.

In the context of our research it is important to carry out the evaluation of the types of people's activities which was done by Imants Bertaitis (2013) in his thesis. The evaluation is based on Hannah Arendt's (1958) proposed *Vita Activa* division: *labor, work and action.* The philosopher Ansis Zunde (1998,53) has presented a concise characteristics of that:

- a human is a living being;
- a human is a social being;
- a human being wants to be free.

Transforming this division to the working inhabitants' work in the context of values, the following *labour, work and action* characteristics are significant.

- ***Labour*** -humans try to satisfy their vital needs, working is anonymous. The primary thing here is sufficient means to survive. Neither the employee nor the employer consider the human as a value and that negatively influences the employee's self-esteem. The employees are only formally informed about the labour safety requirements, they do not fully comply with them. It is *labour* that most commonly is associated with word collocations *human factor* and *human resources***.**
- ***Work*** **-** humans are aware of the fact that they create things which are useful for others. It happens in the communication process with others. It makes them feel like humans who have to provide not only their survival but also well being. Humans can be aware of themselves as a value. The personnel understands the importance of work safety.
- ***Action*** - humans want to be free beings, without any connection with things, without being related to limiting powers, they want to show initiative. Humans are aware of their value. The personnel understands the importance of work safety and does everything in its power to facilitate a safe and healthy work environment where peoples' health is of prime importance – condition of the entire physical mental and social well being, not only the abscence of pathology.

The opinion expressed during the discussions was that *labour* is more common in Latvia than *work,* and it can be related to low self-esteem.

Labour as a type of human activity is most often associated with a constant lack of time, stress, overload both in everyday life and at work. The research carried out by the Work Safety and Environmental Health Institute of Riga Stradiņš University indicated that "almost a third of the inhabitants of the EU suffer from stress at work" (Stress darbā.., 2011).

In the USA three quarters of the employed consider that nowadays people have more stress than in the past, and every fourth person thinks that work is their main source of stress in his/her life, but every third person has considered the option to quit work" (RSU WSEHI, 2011,1). Canadian physiologist

Hanss Selye (Selye 1950; Selye, 1956) was the first to define the concept of ”stress” as the nonspecific response of the body to a situation dangerous to health (Cox, Griffiths, 2000).

Nonspecific reaction – the reaction will be the same irrespective of what kind of stressors are active. Stress is characterised as the general adaptation syndrome. Stress is created when the situation exceeds human's adaptation abilities, for example – when overcoming difficulties, if the problem keeps repeating.

Imants Bērtaitis (2013) proposed to consider the possibility of clarifying the terminology used in the Latvian language, taking into account the fact that in English the term *occupational safety*

is currently prevailing. In Europe there is the *European Agency for Safety and Health at Work* (EU-OSHA), where OSHA stands for *Occupational Safety and Health Agency*. In this context the comparison of the terms of work and civil safety regulations and explanations of basic terms can cause some reflections on that.

According to Civil Protection Law, civil protection is the set of organisational, engineering, economic, financial, social, educational and scientific measures, which is implemented to ensure response in cases of disasters or when there are threats of disaster, as well as to support the needs of the State defence system, if a military invasion has occurred or war has begun (Civilās aizsardzības..., 2007,1). Civil protection is the skill to handle disasters and emergency situations, the skill to create a system and plans to protect oneself and fellow human beings (both at work and in everyday life).

According to Labour Protection Law: Labour protection is safety and health of employees at work (Darba aizsardzības…, 2002,1). Analysing the name of this Law, a question arises – why should labour be protected, if in reality it is human's protection in the work environmemt. A human is the main value, but the profession and work are important for a human to lead a fulfilled life. If a person is ill and can no longer work, life does not become less valuable – it obtains some other value, only one should know how to find a new meaning in life.

Improvement of educational/study process in work and civil safety, as the main possibility of minimizing the formation of formal attitude toward work safety (78%) obviously statistically significantly differs from the advice given by the other respondents (Table 1).

Learning and studying process in the 21st century should be implemented within the context of *Education for Sustainable Development (ESD)* which is based on the principles elaborated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) commission at the end of the 20th century (UNESCO, 2009). They are included in the report of the commission: *Learning: The Treasure Within: Report to UNESCO of the International Commission on Education for the Twenty-first Century* (Delors, 1996). In the report *four pillars of learning: learning to know; learning to be; learning to live together; learning to do* are characterised. According to them each person during his/her lifetime has to acquire knowledge which develops, skills which are suitable for a civilisation governed by knowledge. That is the foundation for skills which will be used in the future in order to be adapted to a changing and complicated world where people are becoming more and more interdependent. Daina Lieginiece (2002) also points out that in the society of knowledge of the 21st century, people and their ability to use knowledge in constantly changing conditions play the main role.

At the beginning of the 21st century UNESCO included the fifth pillar – learning to transform oneself and society (UNESCO, 1995-2010). Taking into consideration the fact that each individual's and entire society's changes in attitudes are significant, the actualisation of this pillar is of particular importance when learning and teaching work and civil safety. The entire society consciously or unconsciously takes part in the process of *informal learning* which is *a natural accompaniment to everyday life*. An essential part of informal learning is *social learning.* "The term *social learning* often refers to an understanding emphasizing that learning is always a social process, because it always takes place in a social setting or context... ..cooperation or being part of a certain division of labour is often the situation for learners. Social interaction allows learners to relate or mirror their ideas, insights, experiences and feelings to those of others. "In this process of "relating to" or "mirroring" these personal ideas, insights, experiences and feelings are likely to change as a result. This mirroring

may lead learners to rethink their ideas in the light of alternative, possibly contesting, viewpoints or ways of thinking and feeling". In social learning four elements provide the basis for learning processes: action, cooperation, reflection, communication. (Draft Unece…, 2004, 3). One of the ways to improve learning/studying can be *life skills education* which is briefly described in the introduction of this article.

In the formal and informal discussions which took place within the framework of this research, the following work and civil safety learning/studying process improvement aspects have been emphasized:

- relation with everyday life in order to faster increase the use of the learning results and enhance the learners' interest;
- emphasizing of correct action (ergonomic, traffic, etc.) in social environment but not emotionally dramatic or tragic accident scenes which often have the opposite effect;
- correspondence of learning content to the employee's work;
- information that is seldom or not at all available to the audience;
- enhancing analytical advancement of society's perception, to increase the possibilities to analyse and evaluate accidents and predict their possible cosequences as a result of non-observance of regulations.

Interesting and attractive process of learning, perceiving and managing the emotional condition of the audience is described.

In order to implement the last point the specialists need pedagogical competence based on teaching/studying results. It should be associated with the professional activity and include adequate components of competence: the ability to form and develop learning environment; the ability to organise and implement the study process in cooperation with other specialists; the ability to manage group work (the emotional condition of participants during the teaching process and manage the teaching process); the ability to evaluate learning results; the ability to organise and manage designing of instructions and teaching materials; the ability to implement teaching quality control and management, the ability to plan and implement one's professional growth (Bērtaitis, Brizga, Ozoliņa, 2014, 2013). When acquiring life skills on preservation health as a main value, both the content and interactive transforming study methods, based on results are significant. Basing on the research findings, it can be concluded that the aim of life skills education is to prepare individuals to make decisions to take positive actions with the purpose of changing the behaviour and the environment, thus improving the safety and implementing preventive health protection.

Conclusions

Basing on the respondents' opinion as well as on the research authors' long term non-structured observations - the following conclusions have been formulated:

- formal attitude toward work and civil safety is formed not only at the work place but also outside of it, beginning from an early chidhood; its formation is mainly determined by:
  - the mutual influence of action improper for society members' safety,
  - people's low self- confidence which forms because a working individual is not cosidered a value;
  - one of the possibilities to minimise the formation of formal attitude toward work and civil safety is life skills education, actualising social studies and *learning to transform oneself and society;*
- future research is topical to evaluate the influence of psychoemotional risk factors on people's health and the possibilities of minimizing this influence.

Bibliography

1. Arendt H. (1958). Labour, Work, and Action: Arendt's Phenomenology of Practical Life. Journal of the Philosophy of Education, vol. 44, No 2-3, 2010, pp. 275–300.
2. Bērtaitis I. (2013). Darba aizsardzības speciālista pedagoģiskā kompetence (Pedagogical competence of the labour protection specialists). Promocijas darbs (Doctoral Thesis), Jelgava, Latvijas Lauksaimniecības universitāte, 162 lpp. (In Latvian)
3. Bērtaitis I., Brizga D., Ozoliņa V. (2014). The classification of occupational health and safety specialists' competences.In: *Žmogaus ir gamtos sauga* 2014,1-oji dalis, 20-oji tarptautinė mokslinė-praktinė konferencija, 2014m. gegužės 7 - 9 d., Kaunas /Aleksandro Stulginkio Universitetas. Vytauto Didžiojo universitetas – Kaunas, Klaipėdos Universitetas, Akademija, pp. 9.-11.
4. Bērtaitis I., Brizga D., Ozoliņa V. (2013). A pedagogical experiment in competence promotion for occupational safety and health specialists. In: *Žmogaus ir gamtos sauga* 2013: 1-oji dalis, 19-oji tarptautinė mokslinė-praktinė konferencija, 2013 m. gegužės 16-17 d., birželio 14-15 d., Kaunas /Aleksandro Stulginkio Universitetas. Vytauto Didžiojo universitetas–Kaunas, Klaipėdos Universitetas: Akademija, pp. 13.-16.
5. Brizga D., Ozolina V., Pēks L. (2014). Development of specialists' attitude to occupational health and safety. Conference proceedings *Engineering for Rural Development*, Jelgava, LLU Ed. Maļinovska L., Osadčuks V, pp. 517-521. [online] [14.12.2014]. Available at http://tf.llu.lv/conference/proceedings2014/Papers/88_Brizga_D.pdf
6. Brizga D., Pēks L. (2014). Workplace wellness and specialists' attitude to work safety. Proceedings of 7the International Scientific conference *Rural Environment. Education. Personality*, Jelgava, LLU, Latvia, pp. 90-96. [online] [14.12.2014]. Available at http://llufb.llu.lv/conference/REEP/2014/Latvia-Univ-Agricult-REEP-2014proceedings.pdf
7. Brizga D., Pēks L., Bērtaitis I. (2013). Computer Use Impact on Students' Health in the Context of Ecological Approach to Occupational Safety. 12th International Scientific Conference *Engineering for Rural Development*. Jelgava, LLU, Latvia, pp. 598-602.
8. Carter N. (2007). *The Politics of the Environment. Ideas. Activism. Policy*. Second ed. New York: Cambridge University Press. 410. p. [online] [13.12.2014]. Available at http://books.google.lv/books?id=2VSAvQgyp_sC&q=anthropocentric&source=gbs_word_cloud_r&cad=4#v=snippet&q=anthropocentric&f=false
9. Ceļu satiksmes drošības direkcija (2013). (Road Traffic Safety Directorate). [online] [13.03.2014]. Available at http://www.csdd.lv/lat/noderiga_informacija/preses_relizes/2013/?doc=2237 (In Latvian)
10. *Civilās aizsardzības likums* (2007). (Civil Protection Law). Latvijas republikas tiesību akti. Saeima. [online] [13.03.2014]. Available at http://likumi.lv/doc.php?id=146474 (In Latvian)
11. Cox T., Griffīths A., Rial-González E. (2000). *Research on Work-related Stress*, European Agency for Safety and Health at Work, Office for Official Publications of the European Communities, 2000, ISBN 92-828-9255-7, [online] [13.03.2014]. Available at http://osha.europa.eu/en/publications/reports/203
12. *Darba aizsardzības likums* (2002). (Labour Protection Law). Latvijas republikas tiesību akti. Saeima. [online] [13.03.2014]. Available at http://likumi.lv/doc.php?id=26020
13. Delors J. (1996). Learning: The Treasure Within: Report to UNESCO of the International Commission on Education for the Twenty-first Century, UNESCO.
14. *Draft Unece Strategy for Education for Sustainable Development*. (2004). Economic Commission for Europe. Committee on Environmental Policy. [online] [14.12.2014]. Available http://www.unece.org/fileadmin/DAM/env/esd/01_Typo3site/ExplanatoryNoteENGcep.ac.13.2004.8.add.2.e.pdf
15. Hentig H.(1999). *Ach die Werte!* Münster: Carl Hanser Verlag.
16. Preacher K. J. (2001). Calculation for the chi-square test: An interactive calculation tool for chi-square tests of goodness of fit and independence [Computer software]. [online] [30.12.2014]. Available at http://www.quantpsy.org/chisq/chisq.htm
17. *Stress darbā jeb psihoemocionālie darba vides riska faktori*. (2011). (Stress at work or psycho-emotional risk factors). Rīgas Stradiņa universitātes aģentūra „Darba drošības un vides veselības

institūts", Rīga, 16 lpp. [online] [13.03.2014]. Available at http://osha.lv/lv/publications/files/psihoemocionalie-riski.pdf (In Latvian)
18. Selye H. (1950). F*orty years of stress research: Principal remaining problems and misconceptions*. CMA Journal, 115, 53–55.
19. Selye H. (1956). *The stress of life*. New York, NY: McGraw-Hill.
20. UNESCO World Conference on Education for Sustainable Development (2009). [online] [13.03.2014]. Available at http://www.esd-world-conference-2009.org/
21. UNICEF (2000). Curriculum Report Card. Working Paper Series. Education Section. Programme Division. United Nations Children's Fund. New York, USA. [online] [13.08.2014]. Available at http://www.unicef.org/education/files/Curricard.PDF
22. *Learning to transform oneself and society* UNESCO (1995-2010). Education. [online] [14.12.2014]. Available at http://www.unesco.org/en/education-for-sustainable-development/strategy/learning-to-transform/
23. *Life Skills Education in Schools* (1997). World Health Organization (WHO) Programme on Mental Health. [online] [13.08.2014]. Available at http://www.asksource.info/pdf/31181_lifeskillsed_1994.pdf
24. *Partners in Life Skills Education*. Conclusions from a United Nations Inter-Agency Meeting. (1999). World Health Organization (WHO). Geneva, p. 14. [online] [13.08.2014]. Available at http://www.who.int/mental_health/media/en/30.pdf Zunde A. (1998). *Ieskats H. Ārendtes gudrības un mīlestības politikā*. (Insights of H. Arendt wisdom and love, politics). No Filosofija: almanahs. Nr. 1, Rīga, LU Filozofijas un socioloģijas institūts, 40.- 67. lpp. (In Latvian)

Correlation between Adult's Adaptive and Maladaptive Perfectionism and Personality Traits

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Abstract. The problem of perfectionism attracted the attention of the psychology science with person's neurotic desire to strive for perfection. Many theoretical and empirical researches have proven the role of perfectionism, revealing numerous psychological and mental disorders of personality development.

Typological approach with the aim to substitute traditional conception of perfectionism as a negative phenomenon for the approach that sets apart "normal" (adaptive) and "neurotic" (maladaptive) perfectionism, has been developed only within the last decades.

The aim of this study was to clarify the relationship between adaptive and maladaptive perfectionism in adults with regard to six main personal traits – neuroticism, extraversion, openness to experience, conscientiousness, agreeableness and honesty-humility.

The theoretical background addresses the concept of perfectionism and its adaptive and maladaptive forms, six main personal traits as well as analyses the latest research on adaptive and maladaptive perfectionism and correlation with mentioned personality traits. In the research participated 130 respondents (119 women, 11 men). The study involved participants with the average age of M=38.77, SD=9.85. Personality traits measure was brought about according to Latvian personality questionnaire and Almost Perfect Scale - Revised Short Form (APS-R). translation and adaptation to Latvian Pearson`s correlation analysis was used to test relationships.

Research hypotheses: Adaptive perfectionism is positively correlated with conscientiousness, extraversion, openness to experience, agreeableness and negatively correlated with neuroticism.

Maladaptive perfectionism positively correlates with neuroticism and negatively correlates with conscientiousness, extraversion, openness to experience, agreeableness.

The results of the research showed that adaptive perfectionism positively correlates with conscientiousness, extraversion and openness to experience and negatively correlates with neuroticism, agreeableness and honesty-humility. Maladaptive perfectionism positively correlates with neuroticism and conscientiousness and negatively correlates with agreeableness and honesty-humility.

The conducted study and its findings may be used in the future studies of the correlation between adaptive and maladaptive perfectionism and adult personality traits.

Keywords: higher education, psychology, adaptive and maladaptive perfectionism, personality traits.

Introduction

It is assumed that perfectionism as a phenomenon has been studied in Europe and America since 1980. In fact, perfectionism has been a topic of research much earlier. A. Adler (1956) defined it as a compensating activity that helps to reach excellence and perfection. Karen Horney regarded perfectionism as narcissist pathology. A. Pacht (1984) described perfectionism as widespread and very serious problem, related to several psychological and physical disorders (alcoholism, psychosomatic disorders, personality disorders, neurosis, depressions etc.)

The problem of perfectionism attracted the attention of the psychology science with person's neurotic desire to strive for perfection. Many theoretical and empirical researches have proven the role of perfectionism when revealing numerous psychological and mental personality development disorders (Hewitt, Flett, 2002; Shafran, Mansell, 2001).

Typological approach with the aim to substitute traditional conception of perfectionism as a negative phenomenon for the approach that sets apart "normal" (adaptive) and "neurotic" (maladaptive) perfectionism, has been developed only within the last decades (Hibbard, Walton, 2014, Dunkley, Blankstein, 2006).

Usually in the scientific literature perfectionism is described as a multidimensional construct (Khodarahim, 2010; Flett, Hewitt, 2002; Macedo, Marques, 2014).

Several researchers agree that there are two main dimensions of perfectionism – adaptive or positive and maladaptive or negative perfectionism (Khodarahimi, 2010; Rice, Preusser, 2002; Hill, Huelsman, 2004).

Maladaptive perfectionism usually implies high demands on oneself and others, excessive concern about mistakes, too critical self-assessment and concerns about reaching unrealistically high standards. Maladaptive perfectionism is associated with many psychological problems (Flett, Hewitt, 2002), including various mood disorders and performance efficiency problems. D. D. Burns (1980), for instance, considered that this kind of perfectionists are negatively related to learning results, for example, it is difficult to study, they have increased anxiety, and very often also bad mood.

Adaptive perfectionism in turn is associated with high standards, low levels of stress and anxiety, positive achievements, safety in relationships and overall satisfactory emotional and psychological well-being (Khodarahimi, 2010; Rice, Preusser, 2002). Similar to maladaptive aspects, adaptive perfectionism aspects emphasize high personality standards - one has a strong desire to excel in performance, however, this desire and standards serve more as a motivation and encouragement. Failures that happen while striving to reach for these standards are allowed and do not cause inner turmoil.

Large part of the scientific literature indicates that perfectionism is related to various personality traits, characteristic of the Western culture. These studies are based upon Five Factor personality model) (McCrae, Costa, 2003) or Big Five (Goldberg, 1990). There is positive correlation between conscientiousness and adaptive perfectionism; this is one of the most constant results in numerous researches (Campbell, Paula, 2002, cited by Stoeber, 2012; Hill, Huelsman, 2004).

D.M. Dunkley (2006) discovered significant correlation between perfectionism and extraversion, openness to experience and conscientiousness. However, there is limited evidence of the correlation between adaptive perfectionism and the openness to experience. Numerous studies have shown that maladaptive perfectionism, using different measurement scales, is closely associated with neuroticism (Hill, Huelsman, 2004; Campbell, Paula, 2002, cited by Stoeber, 2012; Rice, Preusser, 2002). As mentioned in D.M. Dunkley's research (2006), additional study is required – that of the correlation between adaptive and maladaptive perfectionism and other personality traits, especially taking into account different cultures.

This correlation between perfectionism and personality traits has been at the centre of attention over the last 20 years and evoked many scientists interest, since both of these two concepts are important in human life (Ashby, Slaney, 1996; Rice, Stuart, 2010; Flett, Hewitt, 2002). Summarizing these studies, we can conclude that there are lot of researches concerned with perfectionism, but very few examine directly this relation of perfectionism and personality traits in the adult target-group.

The aim of the article: to investigate theoretically and practically the correlation between adaptive perfectionism factors and personality traits in the adult group.

Methodology

Study participants: 130 respondents, 119 women and 11 men, average age of the respondents: M = 38.77, SD = 9.85. Considered groups: adaptive perfectionists (N = 65) and maladaptive perfectionists (N = 65).

Research methods: 1.Teorethical research method - analysis of scientific literature. 2. Empirical methods - survey methods: perfectionism survey - Almost Perfect Scale - Revised Short Form (APS-R), (Khodarahimi, 2010; Rice, Preusser, 2002). Personality traits measure: Latvian personality

questionnaire (LPA-v3, Perepjolkina, 2014) Data processing and analysis: mathematical statistics method - data analysis processing in Excel, SPSS 18 program.

Research hypotheses: 1) there is a positive correlation between adaptive perfectionism and conscientiousness, extraversion, agreeableness and openness to experience and a negative correlation with neuroticism; 2) there is positive correlation between maladaptive perfectionism and neuroticism and negative correlation with conscientiousness, extraversion, agreeableness and openness to experience grace.

Results and discussion

Personality factors was conducted a more detailed analysis of considered groups: adaptive perfectionists (N = 65) and maladaptive perfectionists (N = 65) perfectionist samples, looking at each personality factors making up subfactors descriptive statistics indicators. Each perfectionism questionnaire scales: High Standards, Order and the Discrepancy of descriptive statistics will be provided separately adaptive perfectionists and maladaptive perfectionists groups. Considered groups: adaptive perfectionists (N = 65) and maladaptive perfectionists (N = 65) descriptive statistical data of perfectionism survey scales (Table 1).

Table 1

Descriptive statistical data of perfectionism survey scales within the maladaptive perfectionist group

Perfectionism scales	M	SD	Me	Min	Max
High Standards	39.32	4.71	40.00	25	47
Order	23.98	2.79	24.00	16	28
Discrepancy	54.76	6.80	55.00	42	72

Comment: N=65, legend: M – arithmetic average, SD- standard deviation.

The highest average in the maladaptive perfectionist group is on the Discrepancy scale (M=54.76) (Table 1).

Table 2

Descriptive statistical data of perfectionism survey scales within the adaptive perfectionist group

Perfectionism scales	M	SD	Me	Min	Max
High Standards	40.56	5.67	43.00	28	48
Order	24.70	2.91	25.00	12	28
Discrepancy	25.96	4.41	25.00	17	41

Comment: N=65, legend: M – arithmetic average, SD- standard deviation.

The highest average in the adaptive perfectionist group is on the High Standards scale (M = 40.56), remarkably lower indices than in the maladaptive perfectionists group are observed on the Discrepancy scale (M = 25.96) (Table 2).

Further on there will be provided descriptive statistics of personality factors in the adaptive and maladaptive perfectionists groups (Table 3).

Table 3

Descriptive statistical data of personality factors within the maladaptive perfectionist group

Personality factors	M	SD	Me	Min	Max
Neuroticism	55.82	5.95	55.00	43	72
Extroversion r	50.35	11.50	51.00	33	69
Openness to experience	52.60	9.28	52.00	41	66
Conscientiousness	53.38	8.33	54.00	33	76
Agreeableness	46.42	6.85	47.00	30	50
Honesty-Humility	52.57	7.95	57.00	22	68

Comment: N=65, legend: M – arithmetic average, SD- standard deviation.

As shown in the Table 3, in the maladaptive perfectionist group the highest average is the personality factor scale of Neuroticism (M = 55.82), followed by Conscientiousness (M = 53.38), Openness to Experience (M = 52.60) and Honesty-Humility (M = 52.57). The lowest average is recorded on the Agreeableness factor scale (M = 46.42).

Table 4

Descriptive statistical data of personality factors within the adaptive perfectionist group

Personality factors	M	SD	Me	Min	Max
Neuroticism	45.54	5.95	44.00	35	66
Extroversion r	53.26	11.50	52.00	34	78
Openness to experience	50.48	9.26	50.00	34	68
Conscientiousness	58.40	8.33	64.00	35	69
Agreeableness	48.57	6.85	46.00	34	61
Honesty-Humility	51.11	7.95	51.00	24	68

Comment: N=65, legend: M – arithmetic average, SD- standard deviation.

As shown in the table 4, in the adaptive perfectionist group the highest average is Conscientiousness personality factor (M=58.40), further follows Extroversion (M=53.26) and Honesty-Humility (M=51.11). The lowest average is on the Neuroticism factor scale. (M=45.54) (Table 4).

Table 5

Correlation coefficient between personality factors and the scales of High Standards, Order and Discrepancy within the maladaptive perfectionist group

Variables	1	2	3	4	5	6	7	8
Neuroticism	-							
Extroversion r	0.03	-						
Openness to experience	0.23	0.37	-					
Conscientiousness	0.12	0.62	0.22	-				
Agreeableness	-0.46	0.15	-0.13	0.18	-			
Honesty-Humility	-0.27	-0.18	0.12	-0.37	0.31*	-		
High Standards	0.26	0.21	0.23	0.51**	-0.07	-0.29*	-	
Order	0.12	0.17	0.17	0.61**	-0.24	-0.19	0.49**	-
Discrepancy	0.35**	0.02	0.24	0.26*	-0.03	-0.15	0.44**	0.38**

Comment: N=65. Table shows Pearson correlation coefficients. * $p < 0,05$, ** $p < 0,01$.

As shown on the table 5, in the maladaptive perfectionist group there are statistically significant correlations between the scales of Discrepancy, High Standards and Order, and personality factors: High Standards scale positively correlates with Neuroticism (r=0,26), Conscientiousness (r=0.51), negatively correlates with Honestly-Humility (r=-0.29). Order scale positively correlates with Conscientiousness (r=0.61) (Table 5).

Discrepancy scale positively correlates with Neuroticism (r=0.35) and Conscientiousness (r=0.26). There are also several statistically significant correlations between certain personality factors. Openness to experience positively correlates with Extraversion (r=0.37), Agreeableness negatively correlates with Neuroticism (r=-0,46) and positively correlates with Honesty-humility (r=0.31), whereas Honesty-humility negatively correlates with Conscientiousness (r=-0.37) and Neuroticism (r=-0.27).

Table 6

Correlation coefficients between personality factors and the scales of High Standards, Order and Discrepancy within the adaptive perfectionist group

Variables	1	2	3	4	5	6	7	8
Neuroticism	-							
Extroversion	0.35**	-						
Openness to experience	0.57**	0.62**	-					
Conscientiousness	-0.41**	0.05	-0.03	-				
Agreeableness	0.02	0.24	0.19	-0.05	-			
Honesty-Humility	-0.13	-0.33**	-0.27*	0.06	0.35**	-		
High Standards	-0.42*	0.29*	0.29*	0.64**	-0.32**	-0.36**	-	
Order	-0.01	0.12	0.23	0.63**	-0.24*	-0.11	0.76**	-
Discrepancy	0.53**	-0.31*	0.10	-0.48**	-0.07	0.15	-0.41**	-0.17

Comment: N=65. Table shows Pearson correlation coefficients. * $p < 0.05$, ** $p < 0.01$.

As the table 6 shows, in the adaptive perfectionist group there is statistically significant correlation between the scales of Order and High Standards (r=0.76), which have negative correlation with Discrepancy (r=-41). High Standard scale positively correlates with Conscientiousness (r=0.64), as well as Extraversion and Openness to experience (r=0.29), negatively correlates with Neuroticism (r=-0.42), Agreeableness (r=-0.32) and Honesty-Humility (r=-0.36). Order scale closely and positively correlates with Conscientiousness (r=0,63) and negatively - with Agreeableness (r=-0.24). Conscientiousness negatively correlates with Neuroticism (r=-0.41), Extraversion positively correlates with Neuroticism (r=0.35), negatively correlates with Honesty-Humility (r=-0.33) and such a characteristic of maladaptive perfectionists as Discrepancy scale (r=-0.31). Openness to experience positively correlates with Extraversion (r=0.62) and negatively correlates with Honesty-humility (r=-0.27). There are negative correlations between Discrepancy scale and Extraversion (r=-31), Conscientiousness (r=-48) (Table 6).

The research has carried out detailed analysis of the personality factors within the adaptive and maladaptive perfectionist groups, examining descriptive statistics of each personality factor formative sub-factors. In the research there were included and analysed the most significant correlations of subfactors and statistical averages according to factors of Neuroticism and Conscientiousness, which are the most typical factors of both maladaptive and adaptive perfectionisms.

Within the adaptive and maladaptive perfectionist groups, there was carried out detailed analysis of the personality factors, examining descriptive statistics of the personality factors formative sub-factors. Descriptive statistics of each perfectionism survey scale (High Standards, Order and Discrepancy) will be provided separately within the adaptive and maladaptive perfectionist groups.

Conclusions

- There is limited evidence of the first hypothesis that was proposed at the beginning of the research, i.e., that there is a positive correlation between adaptive perfectionism and Conscientiousness, Extraversion, Agreeableness and Openness to experience and a negative correlation between adaptive perfectionism and Neuroticism. The study came to conclusion that there is positive correlation between adaptive perfectionism and Conscientiousness as well as Extraversion and Openness to Experience and negative correlation with Neuroticism and Agreeableness, as well as with Honesty-humility on the scale of High Standards.
- There is also limited evidence of the second hypothesis, i.e., that there is a positive correlation between maladaptive perfectionism and Neuroticism and a negative correlation between maladaptive perfectionism and Conscientiousness, Extraversion, Agreeableness and Openness to experience. The study came to conclusion that there is positive correlation between maladaptive perfectionism and Neuroticism, that there is also positive correlation between maladaptive perfectionism and Conscientiousness, and negative correlation with Honesty-Humility and Agreeableness factors.
- Positive and negative correlations between the adaptive and maladaptive perfectionism and certain personality factors that were discovered in the study are consistent with other researches carried out in the world.
- Analysing formative characteristics (subfactors) of personality factors, it was concluded that statistics of several of these characteristics considerably differ in the adaptive and maladaptive perfectionist groups. Anxiousness and Shyness is more characteristic to maladaptive perfectionist on the Tolerance subfactor; in the adaptive perfectionist group this was the lowest ratio, but in the maladaptive perfectionist group – the highest ratio. Adaptive perfectionists are characterized with Accuracy, while maladaptive – with Prudence.
- There is higher number of adaptive perfectionists amongst younger respondents although amongst education employees there are more maladaptive perfectionists.
- This specific research came to conclusion that maladaptive perfectionists are characterized with Neuroticism and Conscientiousness, adaptive perfectionists – with Conscientiousness, Extraversion and Openness to experience, maladaptive perfectionists are less characterized with Agreeableness; Honesty-Humility is less typical to both adaptive and maladaptive perfectionists.
- Recommendations for further research: wider selection of participants, closer investigation of characteristic personality traits within the adaptive and maladaptive perfectionist groups, using qualitative research methods, for example, interviews with typical representatives of the adaptive and maladaptive perfectionists. Further research also requires exploring the expressions of the adaptive and maladaptive perfectionists relating to other categories, for example, forgiving, self-efficiency etc.
- It should be taken into account that the methodologies of self-assessment used in the research imply subjectivity factor.
- The selection of participants regarding the gender was not equable, which did not allow to compare the statistic ratios between women and men, as well as distribution according to other socially demographic criterions, except the age, was not equable.

Bibliography

1. Adler A. (1956). The Individual Psychology of Alfred Adler. H. L. Ansbacher and R. R. Ansbacher (Eds.). New York: Harper Torchbooks.
2. Burns D. D. (1980). The perfectionists script for self-defeat. *Psychology Today*, Vol. 14(6). pp. 34-52.
3. Campbell J. D., Di Paula A. (2002). Perfectionistic self-beliefs: Their relation to personality and goal pursuit. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment*, pp. 181–198. Washington, DC, American Psychological Association.
4. Dunkley D. M., Blankstein K. R., Zuroff D. C., Lecce S., Hui D. (2006). Self-critical and personal standards factors of perfectionism located within the five-factor model of personality. *Personality and Individual Differences*, Vol. 40 (3), 409– 420. [online] [22.09.2014]. Available at http://www.sciencedirect.com/science/article/pii/S0191886905003569

5. Flett G. L., Hewitt P. L., Oliver J. M., Macdonald S. (2002). *Perfectionism in children and their parents: A developmental analysis.* In G. L. Flett & P. L. Hewitt (Eds.), Perfectionism (pp. 89-132). Washington, DC: American Psychological Association. [online] [22.09.2014]. Available at http://psycnet.apa.org/books/10458/004
6. Goldberg L.R. (1990). An Alternative „Description of Personality". The Big-Five Factor Structure. *Journal of Personality and Social Psychologs* VoL. 59, No. 6, American Psychological Association pp. 1216-1229. [online] [22.09.2014]. Available at http://projects.ori.org/lrg/PDFs_papers/Goldberg.Big-Five-FactorsStructure.JPSP.1990.pdf
7. Hewitt P. L., Flett G. L., Sherry S. B., Habke M., Parkin M., Lam R. W., et al. (2002). The interpersonal expression of perfection: Perfectionistic self-presentation and psychological distress. *Journal of Personality and Social Psychology*, 84 (6), pp.1303-1325. [online] [22.09.2014]. Available at http://hewittlab.psych.ubc.ca/files/2014/11/2003-Hewitt-et-al.-The-interpersonal-expression-of-perfection-perfectionistic-self-presentation-and-psychological-distress.pdf
8. Hibbard D.R., Walton G.E. (2014). Exploring the development of perfectionism: the influence of parenting style and gender. Social Behaviour & Personality: an international journal. *2014, Vol. 42 Issue 2,* pp.269-278. [online] [22.09.2014]. Available at http://www.academia.edu/6463318/Exploring_the_Development_of_Perfectionism_The_Influence_of_Parenting_Style_and_Gender
9. Hil, W.R., Huelsman T.J., Fur, R.M., Kibler J., Vicente B.B., Kennedy C. A. (2004). A New Measure of Perfectionism: The Perfectionism Inventory. *Journal of Personality Assessment*, 82(1), Lawrence Erlbaum Associates, pp. 80–93 [online] [22.09.2014]. Available at http://psych.wfu.edu/furr/362/2004%20-%20Perfectionism.pdf
10. Khodarahimi S. (2010). Perfectionism and five-big model of personality in an Iranian sample. International Journal of Psychology and Counselling. Vol. 2(4)., pp 72-79. [online] [22.09.2014]. Available at http://www.academicjournals.org/article/article1380361360_Khodarahimi.pdf
11. Macedo A., Marques M., Pereira A.T. (2014). *Perfectionism and psychological distress: a review of the cognitive factors.* IJCNMH 2014; pp. 1-6.
12. McCrae R.R., Costa P.T.Jr. (2003). A contemplated revision of the NEO Five-Factor Inventory. *Personality and Individual Differences* 36 (2004), Baltimore, Maryland, USA, pp. 587–596.
13. [online] [22.09.2014]. Available at http://cda.psych.uiuc.edu/multivariate_fall_2013/neo_mccrae_costa.pdf
14. Pacht A. (1984). Reflections on Perfection. *American Psychologist*, 39, (4), pp 386-390. [online] [22.09.2014]. Available at http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=1985-06683-001
15. Perepjolkina V. (2014). Daudzdimensionālas personības aptaujas izstrāde un validizācija Latvijas pieaugušo izlasē. (Development and Validation of the Multidimensional Personality Survey within Latvian Adult Selection). Summary of Doctoral Thesis in psychology. Latvijas Universitāte, Rīga, 37 lpp. [online] [22.09.2014]. Available at http://www.lu.lv/fileadmin/user_upload/lu_portal/zinas/Kopsavilkums_LV_final_17_12_2013.pdf -(In Latvian)
16. Rice K.G., Preusser K.J. (2002). *The Adaptive/Maladaptive Perfectionism Scale. Measurement & Evaluation in Counselling & Development* (American Counselling Association). Jan2002, Vol. 34 (4), pp. 210-223. [online] [22.09.2014]. Available at http://eric.ed.gov/?id=EJ642628
17. Rice K.G., Stuart J. (2010). Differentiating Adaptive and Maladaptive Perfectionism on the MMPI-2 and MIPS Revised. *Journal of Personality Assessment*. Mar/Apr2010, Vol. 92 Issue 2, pp. 158-167. [online] [22.09.2014]. Available at - http://libra.msra.cn/Publication/38663748/differentiating-adaptive-and-maladaptive-perfectionism-on-the-mmpi-2-and-mips-revised
18. Stoeber J. (2012). Perfectionism and performance. In S. M. Murphy (Ed.), The Oxford handbook of sport and performance psychology (pp. 294-306). New York: Oxford University Press. [online] [22.09.2014]. Available at http://www.researchgate.net/profile/Joachim_Stoeber/publication/235810667_Perfectionism_and_performance/links/02bfe513eaf32ee15b000000.pdf.

Environmental Factors Influencing the Moral Behaviour of Secondary School Students in Imo State, Nigeria

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Abstract: The study investigated the environmental factors influencing the moral behaviour of secondary school students in Owerri Municipal Area, Imo State Nigeria. The sample was made up of 450 secondary students sampled randomly from nine (9) public secondary schools purposively selected from the area of study. Three research questions and three hypotheses guided the study. Relevant data for testing the null hypotheses were collected through the direct delivery method administration of copies of "Influence of Environmental Factors on Moral Behaviour of Secondary School Students" questionnaire (IEFMBSSS) on the respondents. The reliability coefficient of the instrument using Pearson product moment was 0.75. Mean, SD and t-test statistics were used to analyze data. Results showed that home, school and culture are some of the environmental factors that strongly influence the moral behaviour of secondary school students. Based on the findings it was recommended that parents should provide the child with guidance in the approved patterns of behaviour, and certain aspects of culture that do not portray positive values and morals should be discarded for the good of the students and the entire society among others.

Keywords: environment, moral behaviour.

Introduction

The term environment is used by some psychologists to designate the aspect of the organism's surrounding to which it responds to at any given time. According to O.V.Opara (Opara, 2004), environment can be described as anything that is not genetic. It can be physical or psychological. The physical environment deals with the material aspect like homes, schools, community and significant others such as parents, peers, siblings. The psychological environment consists of the feelings, attitudes and expectations of those around the child. They create the emotional climate or atmosphere within which the child lives and learns.

Moral behaviour focuses on the student's ability to differentiate between good and bad as they grow in their different cultural settings. From infancy, through childhood to adolescence and adulthood, the way and manner a child interacts with people in the environment shows the level of moral development he has achieved. These include honesty, respect for oneself, and others, tolerance and self-control. Moral behaviour focuses on the child's ability to differentiate between good and bad as they grow in their different cultural settings. Moral judgment depends on the level of cognitive behaviour because as the level of cognitive abilities increase the understanding and judgment of principles of morality also increases. Moral behaviour among secondary school students includes both a nurturing facet. Some of the moral behaviour occurs as the student watches each other in the school environment. This means that a nurturing environment can still yield a student who is lacking moral development (Drifte, 2004). Moral development and behaviour in secondary school students occurs as they learn at home, school and in the society. These students usually adopt the accepted behaviour of the group that is most significant to them.

L.N.Njoku, (Njoku 2000) notes that secondary school students are in the stage of adolescence which is always a time of moral turbulence characterized by constant assertion of self among them. It is the environment which the students find themselves that influence their behaviors. The complex period of adolescence calls for sensitivity on the part of parents, teachers, and others who work with them to note both physical and psychological changes rapidly taking place at this period. Some tangible issues on the life of these secondary school students include drinking smoking, cheating, stealing and drug abuse. These students may causally attempt these activities and may decide to participate fully in one or more of these related behaviors. This depends on the environment they find themselves. The

students under this category also undergo a period of emotional transition which is marked by changes in the way they view themselves and in the capacity to function independently: they mature intellectually, undergo cognitive changes and perceive themselves in more sophisticated ways. The complexity of this period in the life of secondary school students is seen along the spectrum of multiple contexts such as home, school and neighborhood that they navigate and their various agents of influence such as family, peers, school, media, (culture), (Hart and Carlo, 2005). During the period of adolescence which falls within the secondary school period, the child tries to access and analyze the value system and principle picked up in the childhood. The child sooner or later rejects most of the normalization as practiced by adults in the physical environment as practiced by adults in the physical environment.

According to R.Gross (Gross, 2010), the environment plays important roles in shaping personality and behaviour of the adolescent. The environmentalist argues that a child is not born a genius, lazy, and criminal but it is the environment that makes him to be so (Lahey, 2004). Watson cited in S.Chauhan (Chauhan, 2009) opined that with selective child rearing practices, one can develop adults who are lawyers, beggars and criminal out of children.

People have great differences in their body built, method of living, colour and habits according to the environment (Agulanna and Onukogu, 2002). Psychologists agree that the personality of an individual develops with constant interaction between biological inheritance and environmental forces. According to J.Riley (Riley, 2003), the first environment, wheret the child moves, is into her/his home. His likes, dislikes, expectation and emotions are shaped in early childhood. The student learns how to be aggressive or friendly from home by imitating be it good or bad behaviors of parents or elders (Dash, 2005). The family is the workshop, where for better or for worse children develop an internal pattern of attitudes and beliefs that shape their character and influence their behaviors.

The school enhances student's moral behaviour aiming at providing them with a sense of belonging to a group which is responsive to individual needs. Teachers play a critical leadership role in the school by making rules and regulations and then listen closely to understand a student's reasoning, in order to help the student to the next level of reasoning. The students are allowed to make decisions and the teachers also show them limits in their reasoning. The type of school a child attends, the income background, the educational background of the parents, the parents' status and cultural background determines the moral behaviour of a child especially secondary school students behavior. B.Lahey (Lahey, 2004) defines culture as the pattern of behaviour, beliefs and values that are shared by a group of people. It includes language and superstitious to moral beliefs and good preferences that are learned from the people with whom we live. D.Kennedy (Kennedy, 2000) argues that it is impossible to fully understand a person without understanding his or her culture, ethnic identity and other socio cultural factors. Kennedy contends that childhood is best viewed as a cultural and historical construction order to appreciate the ways in which characterization of children function symbolically as carriers of deep assumptions about the construction of human subjectivity.

N.Njoku (Njoku, 2004), writes that the real purpose of education is to change behaviour. He blames those who think of education as a means of expanding the horizons of ones understanding of world at present and past, as well as preparing for the future. From the foregoing education in Owerri education zone, Imo State particularly secondary education still has a long way to go in inculcating good moral behaviour in school children. Majority of these children are badly behaved and lack sense of direction. It is not out of place to state that many of them seem to be abnormal and emotionally disturbed. The greatest problem facing the researchers is how best to help secondary school students, parents teachers and others who work with these students cope effectively with ever increasing environmental social exigencies associated with the moral behavior of the students involved. The ever increasing rate of delinquency in Owerri Educational zone, Imo State is becoming alarming. This may in the long run affect the standard of academic performance of these children in the area. Teachers so far have been putting serious efforts in order to control the situation. Teachers are expected to deal sincerely with the problems associated with students' behavior as they occur. Can teachers therefore develop an atmosphere of trust and an attitude of acceptance and cultivate empathic understanding in order to grapple with these problems. The problem of this work is the need to offer possible clues that would

ultimately make for a way out of the myriad social and behaviour oriented problems as posed by family/home, school and culture of secondary school students in study area.

Objectives of the study

The main objective of the study is to find out the environmental factors that influence moral behaviour of secondary school students in Owerri Municipal area of Imo State Nigeria. Specifically it intends to;

1. determine the extent home influence moral behaviour of secondary school students in Owerri municipal area of Imo State.
2. determine the extent school activities influence the moral behaviour of secondary school students in Owerri municipal area of Imo State.
3. determine the extent culture influence the moral behavior of secondary school students in Owerri Municipal area of Imo State, Nigeria.

Research questions

1. To what extent does the home influence the moral behaviour of students in the Nigerian secondary schools in Owerri Municipal area?
2. To what extent does school environment influence the moral behaviour of secondary school students in Owerri municipal area?
3. To what extent does culture influence the moral behaviour of secondary school students in Owerri municipal area of Imo State, Nigeria.

The Null Hypotheses

1. School does not significantly influence the moral behavior of secondary school students in Owerri Municipal area.
2. Home does not significantly influence the moral behavior of secondary school students in Owerri municipal area.
3. Culture does not significantly influence the moral behavior of secondary school students in Owerri municipal area in Nigeria.

Methodology

The study adopted analytic descriptive research design. The population consists of nine secondary school purposively selected because of large size of the total number of school located in Owerri municipal area which is the hubbub of Imo State, Nigeria. This population is made up of all the senior secondary students. A sample of 50 students was drawn from each of the schools selected through simple random sampling technique bringing the sample size to 450 students (223 males and 227 females). Researchers made questionnaire captioned "Influence of Environmental Factors on Moral Behavior of Secondary School Students" (IEFMBSSS) was used to elicit information from the respondents. The instrument was made up of sections A and B. Section A contained questions on the personal data of the respondents while section B had questions to find out the influence of environment on secondary school students moral behaviour. The respondents were to tick (√) any of these options ranging from Strongly Agreed (SA), Agree (A), Disagree (D) to Strongly Disagree (SD). The questionnaire was validated by giving it to two senior lectures in Educational psychology and measurement and evaluation respectively all in the department of Educational Foundations of Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria.

Their input and corrections were duly effected and used. The reliability of the instrument was determined through test-retest method for measure of its stability. The set of data which was collected two weeks interval from 20 students outside the respondents were computed using Pearson product moment correlation co-efficient. The reliability co-efficient was 0.75. The researchers administered the questionnaire to the respondents and collected it thereafter. Descriptive statistics of mean (x), standard deviation and t-test statistics technique were employed to test the research questions and research hypotheses respectively.

Results and discussion

The above revealed the mean ratings of the items of family/home influence on moral behaviour of secondary school students at 3.08, 3.49, 3.14, and 2.17 respectively. The table shows the grand mean of 2.87 which was above the reference mean of 2.50. The table also revealed the t-calculated of 15.26,

26.76, 14.41, -6.47, -0.89 and 8.81 respectively. The t-critical is 1.96 with degree of freedom of 448 and at 0.05 with degree of freedom of 448 and at 0.05 level of significant. The null hypothesis is rejected and the alternate accepted. Therefore family/home influences moral behaviour of secondary school students in Owerri, Nigeria (Table 1).

Table 1

t – test analysis of the mean ratings of home influence on moral behaviour of secondary school students.

S/N	Items	$\overline{X}$	SD	Df	t-cal	t-crit	Decision
1	Most secondary school student who engage in cultism and drug abuse come from poor families and broken homes.	3.08	0.81				
	Reference	2.50	0.00	448	15.26	1.96	significant
2	Most secondary school students from families with poor socio-economic status steal in both schools and in larger society.	3.49	0.70				
	Reference	2.50	0.00	448	26.76	1.96	significant
3	Most female secondary school students who are often victims of teenage or premarital pregnancy come from families with poor socio-economic background	3.14	0.82				
	Reference	2.50	0.00	448	16.41	1.96	significant
4	Most secondary school students from broken homes do not obey school regulation let alone obey teachers	2.17	1.09				
	Reference	2.50	0.00	448	-6.47	1.96	significant
5	Most of the secondary school students engage in drunkenness and drug abuse in order to escape from the realities of life in their homes	2.46	0.95				
	Reference	2.50	0.00	448	-0.89	1.96	significant
	Grand score	2.87	0.89				
	Reference	2.50	0.00	448	8.81	1.96	significant

The above table showed the mean ratings of the items of schools influence on moral behaviour of secondary school students as 3.05, 3.50, 3.24, 2.96 and 3.30 respectively which were above the reference mean of 2.50. It also showed the mean of 2.50. The t-calculated of 12.50, 2.30, 18.97. 9.58, 24.24 and 17.75 were also revealed on the table. Thus t-calculated also revealed that the t-cal was greater than the t-critical of 1.96 with degree of freedom of 448 and at 0.05 level of significance (Table 2). The null hypothesis is rejected and the alternate accepted. School activities influence moral behaviour of secondary school students in Owerri municipal area of Imo State.

Table 2

t-test analysis of the mean ratings of school influence on moral behaviour of secondary school students.

S/N	Items	$\overline{X}$	SD	Df	t-cal	t-crit	Decision
1	Most secondary school students behave we not in the company of their friends in the school.	3.05	0.93				
	Reference	2.50	0.00	448	12.50	1.96	significant
2	Most secondary school students are taught good moral behaviour by their school teachers.	3.50	0.69				
	Reference	2.50	0.00	448	3.30	1.96	significant
3	School activities keep the mind of secondary school students busy and to deter them from antisocial behaviours.	3.24	0.83				
	Reference	2.50	0.00	448	18.97	1.96	significant
4	Most secondary school students from broken homes do not obey school regulation let alone obey teachers.	2.17	1.09				
	Reference	2.50	0.00	448	-6.47	1.96	significant
5	Secondary school students who are given regular homework or assignment by their school teachers do not usually have time to go to night parties.	2.96	1.02				
	Reference	2.50	0.00	448	24.24	1.96	significant
6	School teachers inculcate self-discipline and creative thinking in most secondary school students	3.30	0.71				
	Reference	2.50	0.00	448	24.24	1.96	significant
	Grand score	3.21	0.84				
	Reference	2.50	0.00	448	17.75	1.96	significant

The above table revealed the mean ratings of the items of culture influence on moral behavior of secondary of school students as 2.62, 2.69, 2.57, 2.49, 2.76 and 2.63 respectively. It also showed the grand mean of 2.63. The t-calculated are 2.73, 4.52, 1.52, -0.25 and 5.53. The t- critical is 1.96 with degree of freedom of 448 and at 0.05 level of significant (Table 3). The null hypothesis is rejected and the alternate accepted. Therefore, culture influences moral behavior of secondary school students in Owerri Municipal Area.

Table 3

t-test analysis of the mean ratings of culture influence on moral behaviour of secondary school students.

S/N	S/N Items	$\bar{X}$	SD	Df	t-cal	t-crit	Decision
1	Students from cultures that are liberal in sexual matters are more promiscuous than those from cultures that are more reserved in sexual matters.	2.62	0.93				
	Reference	2.50	0.00	448	2.73	1.96	significant
2	Positive cultural values encourage positive behavior of students and vice-versa.	2.69	0.89				
	Reference	2.50	0.00	448	4.52	1.96	significant
3	Rampant cases of immoral behavior by many students are acquired through bad cultural practices	2.57	0.97				
	Reference	2.50	0.00	448	1.52	1.96	significant
4	Students' moral behaviuor are significantly shaped by culture.	2.49	0.84				
	Reference	2.50	0.00	448	-0.25	1.96	not significant
5	Culture has no influence on moral behavior of students.	2.76	1.00				
	Reference	2.50	0.00	448	5.53	1.96	significant
	Grand Score	2.63	0.93				
	Reference	2.50	0.00	448	2.95	1.96	significant

Discussion of Findings

The result in the table 1 shows that the home of the secondary school child has a very great influence on his or her moral behaviour. The mean score ($\bar{x}$) scores of most secondary school students who engage in cultism and drug abuse come from poor families and broken homes is ($\bar{x}$ = 3.08), most secondary school students from homes with poor socio-economic status steal in school and in larger society is ($\bar{x}$ = 3.49), most of the female secondary school students who are often victims of teenage or premarital pregnancy come from homes with poor socio economic background is ($\bar{x}$ = 3.14), most secondary school students from broken homes do not obey school regulations let alone obeying teacher is ($\bar{x}$ = 2.17) and most of the secondary school students engage in drunkenness and drug abuse in order to escape from realities of life in their homes is ($\bar{x}$ = 2.46) (Table 1). This supports J.Riley, (Riley, 2007) who found out that the child earliest home experiences do a lot in influencing his or her moral and spiritual behaviour. This implies that without adequate adult supervision at home, many students can spend most their time roaming the streets. This calls for parents to provide the students with guidance in the approval patterns of behaviour.

The findings further revealed that school activities influence moral behaviour of secondary school students in the study area as seen from the data presented on table 2. It shows that the mean ($\bar{x}$) scores

of secondary school student behaving well when not in the company of their friends in school ($\bar{x}$ = 3.05), secondary school students are taught moral behaviour by their school teachers ($\bar{x}$ = 3.50) school activities keep the mind of secondary school students busy and so deter them from antisocial behaviour ($\bar{x}$ = 3.24), secondary school students who are given regular homework or assignment by their school teachers do not usually have time to go to night parties (2.96) school teachers inculcate self-discipline and creative thinking most secondary school students ($\bar{x}$= 3.30) (Table 2).
The grand mean of 3.21 is greater than the reference mean of 2.50 showing that school activities influence the moral behaviour of secondary school students. This agrees with the work of (Cadwell & Flanagan, 2003) who asserted that teacher-students relationship is a major factor affecting the student's adjustment and moral behaviour.

Research question 3 and hypotheses 3 revealed on table 3 the mean ratings of the items of culture influence on moral behaviour of secondary school students as 2.62, 2.69, 2.57, 2.49, 2.76 and respectively. It also showed the grand mean of 2.50. The t-calculated of 2.73, 4.52, 1.52, -0.25 and 5.53, the t-critical is 1.96 with degree of freedom of 448 and at 0.05 level of significance (Table 3). The null hypothesis is rejected and the alternate accepted. B. Lahey (2004) observed that we are all shaped by our culture and our identity and personality must be understood in that context.

Conclusion and Recommendations

Environmental factors such as the home, school activities and culture all have an overwhelming influence on the child's moral behavior. These days most children especially secondary school students are seen to have thrown to the winds moral and values which has resulted to the rate of violence in the entire globe. This calls for a serious concern for all and sundry to look inwards on how these agents especially home will live out its functions of inculcating good moral values into their children.
It is therefore recommended that:

1. Parents should provide adequate and proper guidance to their children once they are of age in the approved patterns of behaviour.
2. Secondary school students should understand why they are in school and should be ready to take instructions from their teachers. They teachers on the other hand should be dedicated to carry out their responsibilities.
3. There is the need for students to learn their culture well especially the acceptable ones that will encourage good moral behaviour.

Bibliography

1. Agulanna G.G, Onukaogu C.J. (2002). *Introduction to psychology*. Owerri, Joe Mankpa's Publishers, Nigeria.
2. Cardwell M.C., Flanagan C.L. (2003). *Psychology as the complete companion*. Cheltenham, Nelson Thornes publishers, UK.
3. Chauhan S.S. (2009). *Advanced Educational Psychology*. New Delhi, Vikas Publishing House, India.
4. Dash M. (2005). *Education of exceptional children*. Edinburg, Atlantic publishers, UK.
5. Drifte C. (2004). *Encouraging positive behavior in the early years*. London, Paul Chapman Publishing, UK.
6. Gross R. (2005). *Psychology: The science of mind and behavior*. London, Hodder and Arnold publishers, UK.
7. Hart D., Carlo G. (2005). Moral Development in Adolescence. *Journal of Research on Adolescence*, 15:3, pp. 223-233, US.
8. Kennedy D. (2000). The roots of child study: Philosophy, history and religion. *Teachers College Record*, 102 (3), pp.514 – 538, US.
9. Lahey B. B. (2004). *Psychology: An Introduction*: New York: Mc Graw-Hill, US.
10. Njoku L. N. (2000). Advanced developmental task and their accomplishment in the setting in Okafor H. C., C.N. Ugwuegbulam (2000). Adolescent psychology, Owerri, Joe Mankpa's Publishers, Nigeria.
11. Opara O. V. (2004). *Foundations of Education Psychology*. Enugu: Our Savior press Ltd, Nigeria.
12. Riley J. (2003). *Learning in the early years.* London, Paul Chapman Publishers, UK.

Didactics of engineering sciences, usage of IT

Study on Mathematical Literacy in the Context of the Household Welfare

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Abstract: The aim of this article is to investigate the extent to which poverty and inequality indicators as well as household income and consumption expenditure (from the EUROSTAT database) correlate with mathematical literacy indicators (from the OECD PISA 2012) in European countries. Using correlation analysis, there was analyzed the relationship between socio-economical indicators (Gini coefficient, people at risk of poverty or social exclusion, S80/S20 income quintile share ratio, unemployment rate, household median equivalised net income, household mean consumption expenditure per adult equivalent, household consumption expenditure for food and non-alcoholic beverages in percent from all consumption expenditure) and mathematical literacy indicators (mean score in mathematics, share of low achievers in mathematics, share of top achievers in mathematics). Using the cluster analysis there was carried out the European countries classification. The results show that the mathematical literacy and household poverty has a close relationship.

Keywords: education, mathematical literacy, poverty, household, income, consumption expenditure.

Introduction

It is generally accepted that learning and studies of mathematics is significant, first of all, in the formation of a personality and, secondly, in the acquisition of the language and the tools of mathematics which are necessary in the studies of many other professions, e.g. engineering sciences. The mathematical skills of the person are dominant in order to succeed in scientific field in exact sciences.

Mathematical literacy is defined as a bundle of knowledge, skills and values that transcend the difficulties arising from cultural differences and economic inequalities because mathematics and mathematics education themselves are not seen as culture-bound and value-driven. Mathematical literacy is connected to learning how to think, but not to learning what to think about (Jablonka, 2003, 81).

The aim of this paper was to study how the mathematical literacy influences the households' welfare. The authors see an opportunity to link mathematical literacy assessment and households' risk of poverty.

Mathematical literacy can be defined as an individual's capacity to formulate, employ, and interpret mathematics in a variety of contexts. It includes reasoning mathematically and using mathematical concepts, procedures, facts and tools to describe, explain and predict phenomena. It assists individuals to recognise the role that mathematics plays in the world and to make the well-founded judgements and decisions needed by constructive, engaged and reflective citizens (PISA 2012 Assessment…, 2013, 17).

The role of mathematical knowledge, skills and efficiency should be understood in a wider sense: not only as the theoretical knowledge of very specific issues, for example, compact topological space, but also as mathematical thinking as perfect critical thinking in a wider meaning of the term.

To function effectively in today's global society all students need to be taught to think mathematically. Mathematical modelling encourages these thinking skills through what it are very much a literacy-based process. Mathematical modelling is a problem-solving process that requires students to interpret information from a variety of narrative, expository and graphic texts that reflect authentic real-life situations (Doyle, 2005, 1).

Outstanding mathematical ability, an important societal resource, is needed to maintain leadership in today's technological world. In order to function at the optimal level people must be math literate -

able to model and understand real-world phenomena using quantitative tools, analyse and understand complex logical arguments, and use technological tools appropriately and effectively (Edge, 2009, 18).

Mathematics is the key to opportunity. No longer just the language of science, mathematics now contributes in direct and fundamental ways to business, finance, health, and defence. For students it opens doors to careers. For citizens it enables informed decisions. For nations it provides the knowledge to compete in a technological community (Gainsburg, 2005, 2).

Because mathematics literacy plays an important role in the modern world, it could as well be used to make learners become acquainted with how they can use it to develop entrepreneurial skills so that they may be at parallel with poverty. Through mathematics literacy, they would be made to understand and acquire commercial skills, bargaining power, exchange rates and so on, failure of which their ability to carry out these enterprises may be delusional (Tsafe, 2013, 52).

The European Union's Social Inclusion Process uses a relative definition of poverty: "People are said to be living in poverty if their income and resources are so inadequate as to preclude them from having a standard of living considered acceptable in the society in which they live. Because of their poverty they may experience multiple disadvantages through unemployment, low income, poor housing, inadequate health care and barriers to lifelong learning, culture, sport and recreation. They are often excluded and marginalised from participating in activities (economic, social and cultural) that are the norm for other people and their access to fundamental rights may be restricted" (Poverty and Inequality…, 2009, 3).

Methodology

The problem has been approached by analysing and evaluating the scientific literature for the development of the methodological basis of research. Several public databases are used to analyse mathematical literacy in the context of the household welfare.

Database of OECD (Organisation for Economic Cooperation and Development) PISA (Programme for International Student Assessment) 2012 is chosen for this research. PISA aims at testing literacy in three competence fields: reading, mathematics, and science.

PISA 2012 provides an overall mathematics scale, which draws on all of the mathematics questions in the assessment, as well as scales for the three mathematical processes and the four mathematical content categories defined above. The metric for the overall mathematics scale is based on a mean for OECD countries of 500 points and a standard deviation of 100 points that were set in PISA 2003 when the first PISA mathematics scale was first developed. The items that were common to both the 2003 and 2012 test instruments enable a link to be made with the earlier scale (PISA 2012 Results:…, 2014, 46)

The results of PISA 2012 used:

a) mean score in mathematics,

b) share of low achievers in mathematics (Below Level 2),

c) share of top achievers in mathematics (Level 5 or 6).

Database of EUROSTAT (The Statistical Office of the European Communities and part of the European Commission) also is chosen. In this research there are used welfare indicators of 27 European countries in 2010 and 2012 by EUROSTAT data basis.

1. Gini coefficient (2012). The Gini coefficient measures the extent to which the distribution of income within a country deviates from a perfectly equal distribution. A coefficient of 0 expresses perfect equality where everyone has the same income, while a coefficient of 100 expresses full inequality where only one person has all the income. (EUROSTAT, 2014).
2. People at risk of poverty or social exclusion (2012). At-risk-of-poverty or social exclusion, refers to the situation of people either at risk of poverty, or severely materially deprived or living in a household with a very low work intensity. The at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfer) below the at-risk-of-

poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers (EUROSTAT, 2014).

3. S80/S20 income quintile share ratio (2012). S80/S20 income quintile share ratio: refers to the ratio of total equalized disposable income received by the 20% of the country's population with the highest equivalised disposable income (top quintile) to that received by the 20% of the country's population with the lowest equivalised disposable income (lowest quintile), in the relevant dimensions (EUROSTAT, 2014).
4. Unemployment rate (2012).
5. Household median equivalised net income in PPS (Purchasing Power Standards) (2012).
6. Household mean consumption expenditure per adult equivalent in PPS (2010).
7. Household consumption expenditure for food and non-alcoholic beverages in percent from all consumption expenditure (2010).

Information on household consumption expenditure in European countries is derived from the Household Budget Survey (HBS), which is carried out once every five years and the last survey was in 2010.

The Household Budget Survey is a national survey focusing on households' expenditure on goods and services, giving a picture of living conditions in the European Union (EU) (EUROSTAT, 2014).

Information on households Income and Living Conditions Survey is obtained from European Statistics on Income and Living Conditions (EU-SILC). EU Statistics on Income and Living Conditions are the reference source for comparative statistics on income distribution and social inclusion in the European Union (EU) (EUROSTAT, 2014).

A household, in the context of surveys on social conditions or income such as EU-SILC or the Household Budget Survey (HBS), is defined as a housekeeping unit or, operationally, as a social unit having common arrangements, sharing household expenses or daily needs, and in a shared common residence.

A household includes either one person living alone or a group of people, not necessarily related, living at the same address with common housekeeping, i.e. sharing at least one meal per day or sharing a living or sitting room (EUROSTAT, 2014).

Correlation analysis, cluster analysis, and discriminant analysis are used for the statistical analysis of the indicators.

The article analysed data on 27 European countries: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom.

Results and discussion

To analyse the mathematical literacy in the context of the household welfare in this article there are studied the household poverty and inequality indicators, as well as households' income and consumption expenditure correlation with students' mathematical literacy indicators**.** The obtained correlation analysis results show that there is a close correlation between mathematical literacy and poverty (Table 1, Table 2).

Table 1

Indicators of Welfare of European Countries and Students' Mathematical Literacy

Country	Mean score in mathematics*	Share of low achievers in mathematics (Below Level 2)*	Share of top achievers in mathematics (Level 5 or 6)*	Gini coefficient**	People at risk of poverty or social exclusion**	S80/S20 income quintile share ratio**	Unemployment rate %**	Median equivalised net income in PPS**	Mean consumption expenditure per adult equivalent in PPS**	Consumption of food and non-alcoholic beverages %**
Austria	506	18.7	14.3	27.6	18.5	4.2	4.3	20634	21509	12.1
Belgium	515	19	19.5	26.6	21.6	3.9	7.6	18505	20139	13.2
Bulgaria	439	43.8	4.1	33.6	49.3	6.1	12.3	5859	5644	29.3
Croatia	471	29.9	7	30.5	32.3	5.4	16.1	7362	9605	25.6
Czech Republic	499	21	12.9	24.9	15.4	3.5	7.0	10313	8328	20.3
Denmark	500	16.8	10	28.1	19.0	4.5	7.5	18638	19204	11.8
Estonia	521	10.5	14.6	32.5	23.4	5.4	10.0	7887	6755	23.3
Finland	519	12.3	15.3	25.9	17.2	3.7	7.7	18576	18097	13
France	495	22.4	12.9	30.5	19.1	4.5	9.8	18786	18085	15.8
Germany	514	17.7	17.5	28.3	19.6	4.3	5.5	19204	19234	11.6
Greece	453	35.7	3.9	34.3	34.6	6.6	24.5	10007	17036	16
Hungary	477	28.1	9.3	26.9	32.4	4.0	10.9	7725	6827	23
Ireland	501	16.9	10.7	29.9	30.0	4.7	14.7	16188	18950	12.2
Italy	485	24.7	9.9	31.9	29.9	5.5	10.7	15575	17950	18.6
Latvia	491	19.9	8	35.7	36.2	6.5	15.0	6202	6863	26.1
Lithuania	479	26	8.1	32.0	32.5	5.3	13.4	6724	8668	28.5
Luxembourg	490	24.3	11.2	28.0	18.4	4.1	5.1	26579	28621	8.8
Netherlands	523	14.8	19.3	25.4	15.0	3.6	5.3	18978	20016	10
Norway	489	22.3	9.4	22.6	13.8	3.2	3.2	25607	22820	11.8
Poland	518	14.4	16.7	30.9	26.7	4.9	10.1	8630	8801	22.7
Portugal	487	24.9	10.6	34.5	25.3	5.8	15.8	9484	13566	13.3
Romania	445	40.8	3.2	33.2	41.7	6.3	7.0	3595	5385	31.5
Slovak Republic	482	27.5	11	25.3	20.5	3.7	14.0	9799	8315	22
Slovenia	501	20.1	13.7	23.7	19.6	3.4	8.9	14271	15273	14.5
Spain	484	23.6	8	35.0	28.2	7.2	24.8	12359	17858	14.4
Sweden	478	27.1	8	24.8	15.6	3.7	8.0	19601	17436	12.7
United Kingdom	494	21.8	11.8	32.8	24.1	5.4	7.9	16449	14779	12.6

*Source: OECD (PISA 2012 Results:…, 2014, 48, 49, 299).

** Source: EUROSTAT http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

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Table 2

The matrix of Correlation between the Indicators of Welfare of European Countries and Students' Mathematical Literacy

	Mean score in mathematics	**Share of low achievers in mathematics (Below Level 2)**	**Share of top achievers in mathematics (Level 5 or 6)**	**Gini coefficient**	**People at risk of poverty or social exclusion**	**S80/S20 income quintile share ratio**	**Unemployment rate by %**	**Median equivalised net income in PPS**	**Mean consumption expenditure per adult equivalent in PPS**	**Consumption of food and non-alcoholic beverages i%**
Mean score in math	1									
Share of low achievers in mathematics (Below Level 2)	-0.97	1								
Share of top achievers in mathematics (Level 5 or 6)	0.92	-0.81	1							
Gini coefficient	-0.39	0.32	-0.47	1						
People at risk of poverty or social exclusion	-0.72	0.68	-0.67	0.73	1					
S80/S20 income quintile share ratio	-0.51	0.43	-0.59	0.96	0.76	1				
Unemployment rate %	-0.42	0.33	-0.50	0.63	0.52	0.71	1			
Median equivalised net income in PPS	0.46	-0.43	0.45	-0.57	-0.75	-0.59	-0.54	1		
Mean consumption expenditure per adult equivalent in PPS	0.37	-0.35	0.35	-0.37	-0.60	-0.37	-0.28	0.93	1	
Consumption of food and non-alcoholic beverages %	-0.53	0.51	-0.50	0.43	0.74	0.45	0.26	-0.87	-0.90	1

Source: Authors' calculations, using EUROSTAT data and OECD PISA 2012 data.

In correlation matrix (Table 2) it is shown that between indicators "People at risk of poverty or social exclusion" and "Mean score in mathematics" exist perceptible negative correlation (-0.72). Also between the indicators "People at risk of poverty or social exclusion" and "Share of top achievers in mathematics (Level 5 or 6)" exist negative correlation (-0.67). While between the indicators "People at risk of poverty or social exclusion" and "Share of low achievers in mathematics (Below Level 2)" exists positive correlation (0.68).

In correlation matrix (Table 2) it is shown that between households' "Median equivalised net income in PPS" and "Mean score in mathematics" exist positive correlation (0.46). Also between the household's "Median equivalised net income" and "Share of low achievers in mathematics (Below Level 2)" exist negative correlation (-0.43).

The same correlation coefficients' signs are also between the household consumption expenditure and mathematical skills. One of the indicators of household wealth is food consumption expenditure proportion of total consumption expenditure. Between “Consumption of food and non-alcoholic beverages in percent” and “Mean score in mathematics” is a negative correlation (-0.53).

It can be concluded that the lower is the level of mathematical background of the society the more there are people at risk of poverty or social exclusion in the given society.

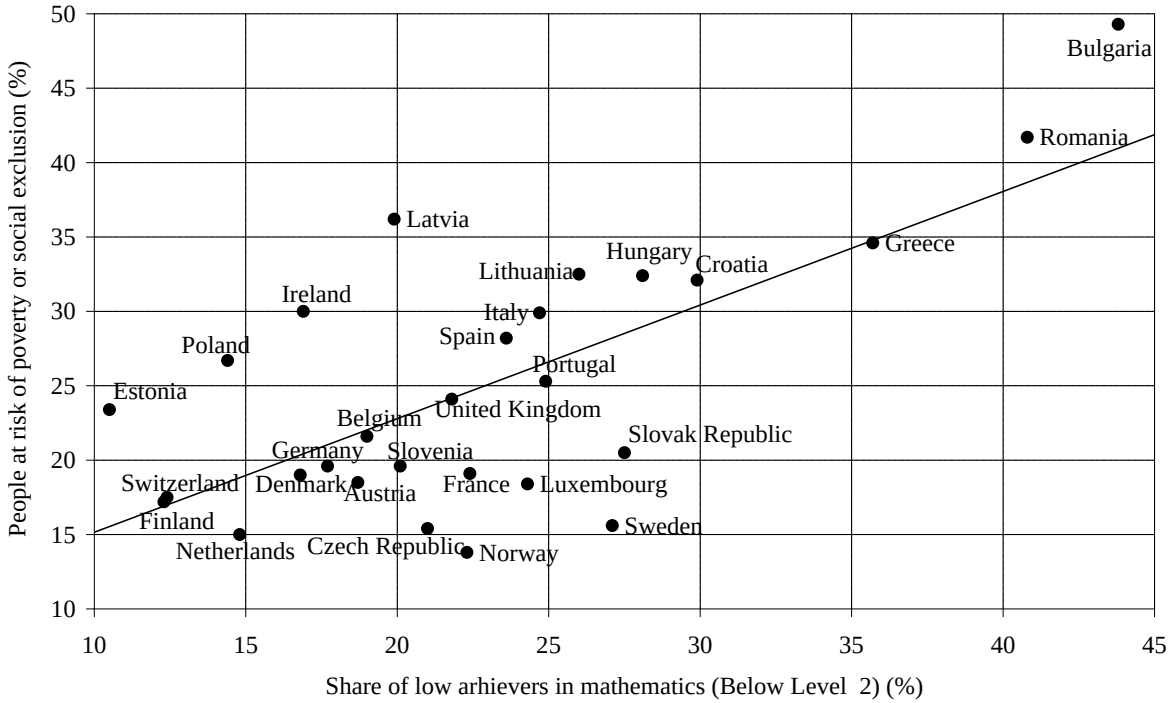

Figure 1. People at risk of poverty or social exclusion and share of low achievers in mathematics (Below Level 2).
Source: Authors’ calculations, using EUROSTAT data and OECD PISA 2012 data.

The greatest value of "People at risk of Poverty or Social Exclusion" in 2012 is in Bulgaria (49.3), followed by Romania (41.7) and Latvia (36.2), while the lowest value of the "People at risk of Poverty or social Exclusion" is in Norway (13.8), Netherlands (15) and Czech Republic (15.4). Bulgaria (43.8), Romania (40.8) and Greece (35.7) are the countries with the highest index value by the indicator "Share of Low Achievers in mathematics (Below Level 2)", while Estonia (10.5), Finland (12.3) and Poland (14.4) are three countries with the lowest index value (Figure 1).

Using cluster analysis there are identified six groups of countries with similar poverty, inequality, income and consumption expenditure and mathematical skills indicators. Six groups of countries are resulting from the application of k-average method. In all six groups of countries all mean value showings differ significantly. Values in the cluster centres are shown in Table 3.

The first cluster countries (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Sweden, and United Kingdom) are characterized by the highest level of mathematical skills, and relatively high rates of income and consumption expenditure figures, as well as the relatively low inequality.

The second cluster countries (Croatia, Estonia, Czech Republic, Hungary, Lithuania, Poland, Slovak Republic) are characterized by a high level of mathematical skills, and relatively low levels of income inequality. Compared to the first cluster of countries they have lower incomes and consumer spending, as well as a greater share of expenditures for food.

The third cluster countries (Greece, Portugal, Slovenia, and Spain) are characterized by the highest unemployment rate.

The fourth cluster countries (Bulgaria, Latvia, and Romania) are characterized by the lowest level of mathematical skills, the greatest income inequality, and the greatest value of the parameter "People at risk of Poverty or Social Exclusion", the lowest income and consumer spending, as well as the highest proportion of food expenditure.

The fifth cluster country (Norway) is characterized by the lowest income inequality and the lowest value of the characteristic "People at risk of Poverty or Social Exclusion" and "Unemployment rate".

The sixth cluster country (Luxembourg) is characterized by the highest income and consumption, as well as the smallest food consumption specific weight.

Table 3

Final Cluster Centres

	Clusters					
	1	2	3	4	5	6
Mean score in mathematics	502.73	492.43	481.25	458.33	489.00	490.00
Share of low achievers in mathematics (Below Level 2)	19.29	22.49	26.08	34.83	22.30	24.30
Share of top achievers in mathematics (Level 5 or 6)	13.56	11.37	9.05	5.10	9.40	11.20
Gini coefficient	28.35	29.00	31.88	34.17	22.60	28.00
People at risk of poverty or social exclusion	20.87	26.17	26.93	42.40	13.80	18.40
S80/S20 income quintile share ratio	4.36	4.60	5.75	6.30	3.20	4.10
Unemployment rate %	8.09	11.64	18.50	11.43	3.20	5.10
Median equivalised net income in PPS	18284.91	8348.57	11530.25	5218.67	25607.00	26579.00
Mean consumption expenditure per adult equivalent in PPS	18672.64	8185.57	15933.25	5964.00	22820.00	28621.00
Consumption of food and non-alcoholic beverages %	13.05	23.63	14.55	28.97	11.80	8.80

Source: Authors' calculations, using EUROSTAT data and OECD PISA 2012 data.

Hereafter there was used discriminant analysis to determine discriminant functions that separate the definite groups of countries and to ascertain that the determined clusters of countries were classified properly. Out of 27 countries dealt with, 21 countries are classified properly but 6 countries can be referred to the cluster of other countries. Thus 78% of all countries are classified in six clusters. The first cluster includes 11 countries out of which Denmark and Sweden can be referred to the countries of the fifth cluster, in its turn Italy and United Kingdom – to the countries of the third cluster. The second cluster includes 7 countries, one country – Croatia – can be attributed to the fourth cluster. The third cluster includes 4 countries, and one country – Slovenia – can be attributed to the first cluster.

Conclusions

The research has revealed that there exists correlative coherence between "Share of Low Achievers in mathematics (Below Level 2)" and "People at Risk of Poverty or Social Exclusion", but our thesis is that any of these indicators is neither regressor nor regressand. These are indicators which complement each other and mutually interact. Generally speaking the children in households which are under the risk of poverty get poorer mathematical education and vice versa – if children have problems with acquisition of mathematics then probably they are from the households under the risk of poverty. When elaborating the socioeconomic policy for poverty decrease, these both factors should be taken into account.

When classifying the European countries according to socio-economic indicators and mathematical literacy indicators with the help of the method of cluster analysis, it was stated that there were formed six clusters. The interpretation of the clusters of countries requires further investigation.

However this study proved that the households' welfare is related to the mathematical literacy of the population.

Bibliography

1. Doyle K. M. (2005). Mathematical problem solving: A need for literacy. In Bryer, Fiona and Bartlett, Brendan and Roebuck, Dick, Eds. *Proceedings Stimulating the "Action" as participants in participatory research 2*, pp. 39-45, Surfers Paradise, Australia. [02.02.2015.]. Available at http://eprints.qut.edu.au/14236/1/14236.pdf .
2. Edge D. L. (2009). Math Literacy: the Relationship of Algebra, Gender, Ethnicity, Socioeconomic Status, and Avid Enrollment with High School Math Course Completion and College Readiness. Doctoral Thesis, University of North Texas. [online] [02.02.2015.]. Available at http://digital.library.unt.edu/ark:/67531/metadc11046/m2/1/high_res_d/dissertation.pdf .
3. EUROSTAT (2014). Category: Living conditions glossary. [02.02.2015.]. Available at http://ec.europa.eu/eurostat/statistics-explained/index.php/Category:Living_conditions_glossary.
4. Gainsburg J. (2005). School mathematics in work and life: what we know and how we can learn more, Technology in Society, Vol 27, issue 1, 2005 1-22. DOI: 10.1016/j.techsoc.2004.10.007.
5. Jablonka E. (2003). Mathematical Literacy. Bishop, A. J., Clements, M. A., Keitel, C., Kilpatrick, J. and Leung, F. K, S. (Eds.). *Second International Handbook of Mathematics Education*. Kluwer Academic Publishers, pp. 75-102.
6. *PISA 2012 Assessment and Analytical Framework: Mathematics, Reading, Science, Problem Solving and Financial Literacy* (2013). OECD Publishing. [online] [02.02.2015.]. Available at http://dx.doi.org/10.1787/9789264190511-en .
7. *PISA 2012 Results: What Students Know and Can Do – Student 2014 Performance in Mathematics*, Reading and Science (2014). (Volume I, Revised edition, February), PISA, OECD Publishing. [02.02.2015.]. Available at http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-i.htm
8. *Poverty and Inequality in the EU*. (2009). Produced by the EAPN Social Inclusion Working Group with the collaboration of Hugh Frazer. European Anti Poverty Network (EAPAN). EAPN Explainer. [online] [02.02.2015.]. Available at http://www.eapn.eu/images/docs/povertyexplainer_en.pdf.
9. Tsafe A. K. (2013) Mathematics Literacy: An Agent of Poverty Alleviation and National Development. *Journal of Education and Practice*. Vol. 4, No 25, pp. 51- 54. [online] [02.02.2015.]. Available at http://www.iiste.org/Journals/index.php/JEP/issue/view/897.

Improvement of Students' IT Knowledge and Skills Necessary for Diploma Work

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Abstract: The focus of this study is on the extent to which students acquire the knowledge and skills of information technology (IT) needed for research and for the preparation of diploma work in natural and social sciences. Such knowledge and skills are traditionally acquired via informatics courses and individual consultations. In the academic year 2005/2006, the authors introduced appropriate computer based tests and independent works to test the students' knowledge and skills necessary for diploma work. Tests mainly contain data processing situations. Students should select one or several appropriate data processing methods. In diploma works, application of text processing, spreadsheet, presentation, database programs is important, for example, to create a table of contents. Therefore questions may be about the usage of the above mentioned programs where students should select the appropriate typical set of words. In the independent works, students have to make a decision on the data processing methods, their usage, and draw conclusions. Starting with the academic year 2009/2010, the authors have developed and presented computerized examinations with samples of data sets and summarizing tables related to the area of specialization. The authors have established that it is important to ensure that e-learning materials offer such data samples. In the academic year 2012/2013, the authors worked out and introduced graphic depictions of statistical concepts. There are given recommendations for improvement of students' IT knowledge and skills in the article.

Keywords: higher education, e-learning, statistics, computer based tests.

Introduction

In order to enable students to take decisions on appropriate data processing methods, while writing their diploma works, the following aids have been developed in the world:

- Literature dealing with information technology issues and statistics, with each source offering its own version of the educational content;
- Scientific publications in various fields, with statistical indicators that can be used to generate teaching data;
- Various algorithms in the form of block schemes and summarized tables, each produced in accordance with the selected statistical method (McCrum-Gardner, 2008; Mertler, Rachael, 2002; Vitins, Rasnacs, 2009; Teibe, 2007);
- Computerized test systems to assess the students' knowledge and skills as well as the usage of recommendations that can help improve knowledge and skills (Prokofjeva, 2007).

The aim of the research was to develop a classification of optimal information technology tools and data processing methods in accordance with scientific research; appropriate data samples and computerized tests in the relevant area of specialization.

Hypothesis: If knowledge and skills are to be improved, it is important to offer optimal information technology tools and data processing method classification in accordance with scientific research, also to ensure appropriate data samples and computerized tests in the relevant area of specialization.

In the present study, 2,029 students in the field of natural and social sciences, 13 faculty members from Latvian universities were surveyed, and the data were analyzed in the MS Excel and SPSS 20 environment.

Methodology

The classification scheme means the steps of ongoing work necessary for solving tasks of informatics and statistics. The scheme was established with the help of expert views and the literature data. A discussion about summarizing tables (McCrum-Gardner, 2008; Mertler, Rachael, 2002; Vitins, Rasnacs, 2009; Teibe, 2007) has already been described in the literature (Rasnacs, Vitins, 2014; Rasnacs, Vitins, 2012; Vitins, Rasnacs, 2012). The literature also offers a bloc scheme in which data

processing situations are classified at two levels and in the following way (Vitins, Rasnacs, 2009; Teibe, 2007):

- statistics with one sample;
- statistics with two samples;
  - normal distribution;
  - independent samples;
  - relationships between two variables;
  - Pearson's time data;
  - Cross tabulation;
  - the resulting variant, whether binary or continuous;
  - one variable and continuous and one categorised sample.

In a paper addressed to specialists in the field of oral and facial surgery, McCrum-Gardner offered a summarizing table (Table 1) in terms of the selection of an appropriate data processing method if two samples must be compared (McCrum-Gardner, 2008).

Table 1

Classification of data processing assignments and the selection of solutions on the basis of the distribution

Scale of measurement	Independent samples	Paired samples
Interval scale (parametric assumptions satisfied)	Independent samples t-test, Mann – Whitney U-test	Paired samples t-test
Ordinal scale or interval (parametric assumptions not satisfied)	Mann – Whitney U-test	Wilcoxon signed rank test
Nominal scale two categories	Chi square test for 2x2 table	McNemar's test
Nominal scale C categories (C>2)	Chi square test for 2xC table	-

McCrum-Gardner also offered a summarizing table (Table 2) for the selection of an appropriate data processing method if more than two samples must be compared (McCrum-Gardner, 2008).

Table 2

A summarizing table for the selection of an appropriate data processing method if more than two samples have to be compared

Scale of measurement	Independent samples	Paired samples
Interval scale (parametric assumptions satisfied)	One-way ANOVA	Repeated measures analysis of variance
Ordinal scale or interval scale (parametric assumptions not satisfied)	Kruskal-Wallis One-way ANOVA	Friedman's test
Nominal scale	Chi square test for RXC table	Cochran's Q
Interval scale (parametric assumptions satisfied)	One-way ANOVA	Repeated measures analysis of variance

Mertler and Vannatta offer a summarizing table related to multi-variant statistical choices depending on the independent (or dependent) variable type and the number or type of dependent or independent variables (Mertler, Rachael, 2002). This, however, is not enough to ensure that students or specialists can take independent decisions on an appropriate data processing method. The problem is that the summarizing tables and algorithm bloc schemes do not depict possible data processing situations to an adequate degree, and that means that they do not reflect the possible diversity. It is also true that data samples related to the relevant area of specialization are not offered in parallel with each situation.

The authors obtained data related to the area of specialization, generating them as random numbers or asking students to fill out anonymous educational questionnaires. The students then entered the results of the questionnaires into a computer and learned to process data in the presence of an instructor. It is

easier to obtain normally distributed data if the data are generated on the basis of statistical indicators from scientific publications. In that case, if students are to learn how to work with data with a different type of distribution, it is important to use the mathematical model so that the average arithmetic value of the transformed data, the standard deviation and median are as close to the target indicators as possible (Rasnacs, Vitins, 2012). Data from the questionnaire also make it easier to obtain quantitative data that are not normally distributed. If we look at the normal distribution by population (e.g. gender), then the most likely situation is one in which the data in one of the populations are not distributed normally, which means that non-parametric methods must be brought to bear. At the same time, however, students must learn to work with normally distributed data, in which case it is necessary to generate normally distributed data with the same mean value and standard deviation as the survey data. The MS Excel tool Data/Data Analysis/Random Number Generation is used to round off generated numbers and to get rid of values that are not in line with reality. This usually does not make it possible to obtain precisely and normally distributed data on the basis of all criteria, but at least they conform to the form of the histogram.

Faculty members were surveyed mostly so as to identify issues in relation to which they have different views. These refer to the use of criteria related to a normal distribution, the preparation of presentations, and criteria that are used to select techniques in relation to information technology exams. Respondents were asked to rate issues on the basis of a 10-point scale. If, for instance, the question related to appropriateness, then 1 meant very inappropriate and 10 meant most appropriate. The results of the survey are used to evaluate the students' work and to prepare schemes in a manner that they understand.

Results and discussion

When it comes to ordinal data, there is usually a calculation (Teibe, 2007; Teibe, 2001) of the value of the median Me, up to which there are 50% of data values in an increasing sequence; the mode Mo, which is the most common value; the minimum Min; the maximum Max; the 1st quartile Q_1, up to which 25% of data values exist in an increasing sequence; the 3rd quartile Q_3, up to which 75% of data values exist in an increasing sequence; the inter-quartile distribution IQR, or the difference between the 3rd and the 1st quartile. Faculty members at Latvian universities believe that the most appropriate criterion is the visual evaluation of a histogram (Table 3). Most expressed views were neutral (5 points on the scale).

Table 3

The appropriateness statistics of a normal distribution, as seen by faculty members at Latvian universities, 10-point scale (n=13)

Criterion	Me	Mo	Min	Max	Q_1	Q_3	IQR
Histogram	5	5	5	9	5	5	0
Lapunov theorem	5	5	5	9	5	5	0
Visual evaluation of points and lines on a graph	5	5	5	9	5	5	0
On the basis of the error of the mean value	5	5	5	9	5	5	0
The Kolmogorov-Smirnov test	5	5	5	9	5	5	0
Parametric methods can be used to test hypotheses in relation to small samples	5	5	4	6	5	5	0
On the basis of skewness and kurtosis and their standard errors	5	5	4	6	5	5	0
The Kolmogorov-Smirnov test with the Lilliefors correction	5	5	5	9	5	5	0
The Shapiro-Wilk test	5	5	5	9	5	5	0
The Chi square test	5	5	4	6	5	5	0

Faculty members were also asked to state their views about the appropriateness of computer-based tests (Table 4). Most tests at Latvian universities involved the e-lerning Moodle environment (RSU e-

studijas, 2014), but any test preparation or Internet survey program can be used (Витиньш, Раснач, 2011).

Table 4

The views of faculty members about the appropriateness of computer-based tests (n=13)

Me	Mo	Min	Max	Q_1	Q_3	IQR
7	7	6	7	7	7	0

The authors believe that educational content, classification schemes and computerised tests must be mutually linked. In structuring classification schemes, thought was given to how students can best be helped to understand the selection of appropriate data processing methods, as well as how their knowledge and skills can be improved. Over the course of time, the authors found that students understand data processing situations at a better level if they see links between the various situations. Classification schemes help in this regard, and the authors structured them in the OWLGRED environment (Rasnacs, Vitins, 2014). For example, scheme of SPSS application for calculations of descriptive statistics (Figure 1).

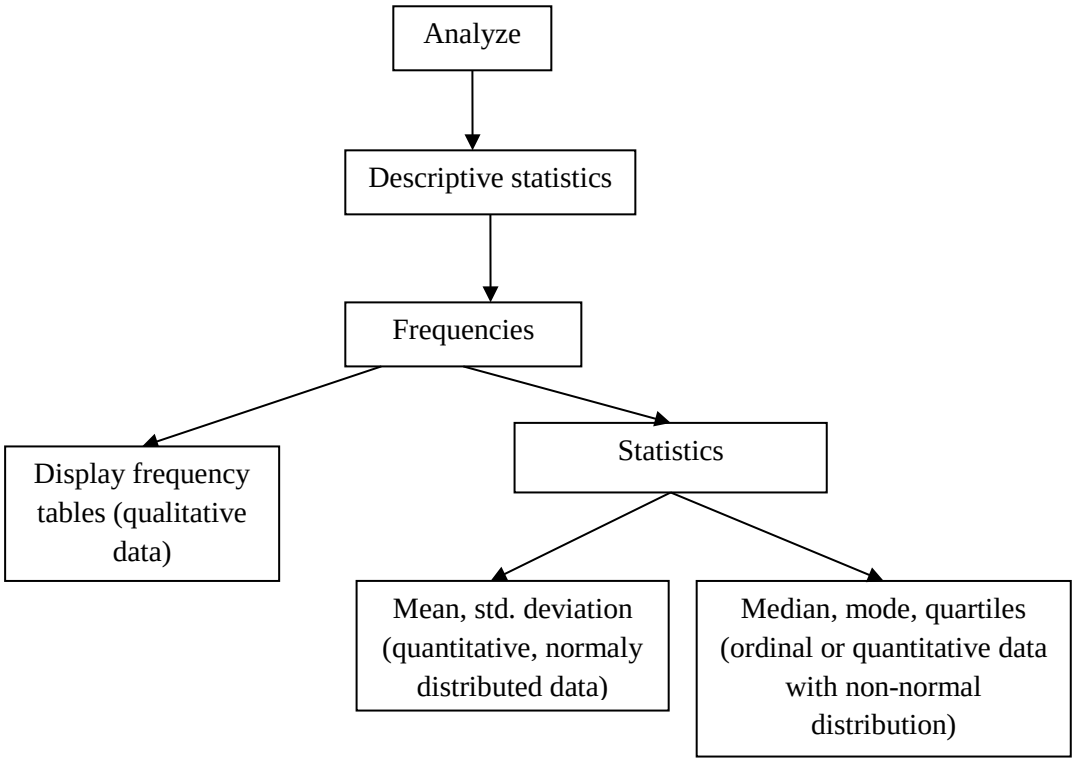

Figure 1. Scheme of SPSS application for calculations of descriptive statistics.

Issues related to educational content cannot be precisely presented in a descriptive way. In partnership with faculty members from Latvian universities, the authors designed formulations of the names of educational topics, but these did not include statistical indicators, graphs or methods to examine hypotheses. Faculty members (n=13) rated the importance of each topic on a 10-point scale (1 meaning very unimportant, 10 meaning very important).

Initially the authors offered classification schemes with statistical indicators, tests and graphs in English and in the OWLGRED environment (Rasnacs, Vitins, 2014). Over the course of time, however, the authors found that if students are to have a positive approach toward schemes and tests, it is more purposeful to present classification schemes with MS Excel, Access and SPSS commands. The tests were linked to educational content, and this was done with the help of schemes. There are recommendations in the literature about various methods when it comes to data from various ranges. Some indicators can be obtained with the same series of commands, and then would be appropriate for

one range, but not another. There are versions in relation to MS Excel, Access and SPSS tools when it comes to any data processing situation:

- the tool cannot be used;
- the tool can be used, but the result is useless, e.g. the variable "gender" (1 – man, 2 – woman), average mean value;
- the tool can be used, and the result is of use, e.g. the variable "body mass" (kg), average mean value.

Faculty members have differing views with respect to various results. If, for instance, we look at the variable "level of education" (1 – elementary, 2 – secondary, 3 – higher), then the average mean value of the education level will be seen as a useful result by some faculty members, but not others. That is because students and faculty members can have different understandings about the belonging of data to a measurement scale.

The authors have gradually implemented fundamental changes in the teaching of informatics and statistics courses at the university level:

- during the academic year 2005/2006, the authors introduced computerised tests to monitor the knowledge, skills and tests of students; these required students to handle tasks that were related to the writing of a diploma work (Rasnacs, Vitins, 2012);
- starting with the academic year 2009/2010, the authors offered computerised test assignments with generated data samples related to the area of specialization, as well as new summary tables with references to data samples linked to that area (Rasnacs, Vitins, 2009);
- during the academic year 2012/2013, the authors introduced graphic depictions of linkages between informatics and statistics that can be used as algorithms in taking decisions on the appropriate data processing method or information technology tool; these depictions were linked to the course content and to computerized tests that were designed in accordance with the graphics (Rasnacs, Vitins, 2014).

The Spearman rank correlation was calculated in relation to the year of university graduation and to computerized test results or research projects (Table 5). In the table, the first column shows the correlation coefficient, r_s, and the second shows the relevant p-value.

Table 5

The results of the Spearman rank correlation in relation to the year of university graduation and to the results of computerised tests and research projects (n=2,092)

Type of test	$\mathbf{r_s}$	**p**
Computerized test	0.169	<0.001
Research work	0.091	<0.001

Conclusions

- Faculty members consider computerized tests to be appropriate (Me=7).
- To improve the knowledge and skills of students, mutually linked classification schemes with computer software commands, as well as computerised tests and research projects must be introduced.
- The quality of computerized tests and research work has increased in a statistically valid way over the course of time (Spearman rank correlation, $p<0.001$); hypothesis confirmed.
- The authors believe that the improved quality is largely facilitated by generated data samples that are related to the area of specialization.

Bibliography

1. McCrum-Gardner E. (2008). Which is the correct statistical test to use? *British Journal of Oral and Maxillofacial Surgery* 46 p. 38 – 41. [online] [29.10.2014]. Available at http://www.sciencedirect.com/science/article/pii/S0266435607004378
2. Mertler A. C., Rachel A. V. (2002). Advanced and Multivariate Statistical Methods. *Practical Application and Interpretation*. Los Angeles, Pyrczak Publishing, p. 12. [online] [29.10.2014]. Available at http://www.unt.edu/rss/class/Jon/ResourcesWkshp/DecisionTree_MertlerVannatta.pdf
3. Prokofjeva N. (2007). Datorizētās zināšanu pārbaudes modeļi un metodes. Promocijas darba kopsavilkums (Computer knowledge control models and methods. Summary of PhD Thesis). Riga Technical University, Riga, Latvia, p. 26. [online] [29.10.2014]. Available at www3.acadlib.lv/greydoc/Prokofjevas_disertacija/Prokofjeva.pdf (in Latvian)
4. Rasnacs O., Vitins M. (2014). Diagrams for Taking a Decision on Appropriate Data Processing Methods in the Areas of Health Care and the Social Sciences. *The International Journal of Technology, Knowledge and Society*, Volume 9, Issue 3, 2014. [online] [29.10.2014]. Available at http://ijt.cgpublisher.com/product/pub.42/prod.948
5. Rasnacs O., Vitins. M. (2012). An Information System to Learn Characteristic Sets of Words and to Examine Knowledge in Statistics. *Databases&Information Systems* VII. IOS Pressp. 361 - 370.
6. *RSU e-studijas* (2014). (e-learning Riga Stradins University). [online] [29.10.2014]. Available at estudijas.rsu.lv (in Latvian).
7. Teibe U. (2007). Bioloģiskā statistika (Biological statistics), Rīga, LU, 156 lpp. (in Latvian).
8. Teibe U. (2001). Varbūtību teorijas un matemātiskās statistikas elementi medicīnas studentiem (Theory of probability and mathematical statistical elements for medical students). Rīga, RSU, 88 lpp. (in Latvian).
9. Vitins M., Rasnacs O. (2009). Study Model of Informatics' Subjects in University Linked with Speciality. Proceedings of the International Scientific Conference *Rural Environment. Education. Personality*. (REEP) Nr.4, LLU, Jelgava, Latvia, p. 377 - 383.
10. Vitins M., Rasnacs O. (2012). Preparation of Speciality-Integrated Assignments in Informatics Study Courses at the Higher Education Level. *Informatics in Education*, Volume 11, Number 1, 2012. [online] [29.10.2014]. Available at http://www.mii.lt/informatics_in_education/htm/INFE196.htm
11. Витиньш М. В. Раснач О. И. (2011). Подгонка к тестовым программам заданий учебного курса информатики, интергированного для специальности (Integrated with specialty course of informatics and statistics adjustment test making programs). V Международная междисциплинарная научно-практическая конференция „Информационная среда вуза XXI века" (5-th International interdisciplinary scientific practical conference „University information environment in 21-st century"). Петрозаводский Государственный Университет, Петрозаводск, Республика Карелия, 161 - 164 с. (in Russian)

Improving Knowledge of Elementary Mathematics – the Way to Better Studying of Higher Mathematics

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Abstract: Higher Mathematics is one of core subjects in engineering sciences and at the same time it is one of the stumbling blocks in the first year of studies for many students. The main problem is insufficient level of student knowledge in Elementary Mathematics. In order to overcome this problem the Department of Engineering Mathematics have prepared short video lectures which are available online for free and compensative courses before first semester. The paper covers educational data analysis and our teaching experience.

Keywords: Teaching Mathematics, student knowledge in Elementary Mathematics.

Introduction

Riga Technical University (RTU) is the only technical university in Latvia, as well as, the oldest technical university in the Baltic States, where nowadays studies over 15000 students. The goal of the university is to prepare highly qualified, responsible and creative specialists in the engineer-technical fields. Mathematical knowledge and skills are the ground of all engineer-technical specialties that is why all students of RTU must acquire Higher Mathematics. As statistics of university shows, Higher Mathematics is also one of the biggest stumbling blocks for the first year students. It has several reasons, but one of the main – insufficient level of knowledge in Elementary Mathematics.

Description of existing situation

As entering exam in universities of Latvia is long cancelled, the enrolment in RTU is by the results of centralized exams in school (CE). CE works are evaluated in percentage - from 0 % to 100 %. Unfortunately, there are students that are accepted in RTU whose CE results in Mathematics are below 30 %, and even below 20 %. In Figure 1 is the amount of students that were accepted in RTU in 2014 according to their CE results (Birzniece, 2014, 5459-5463).

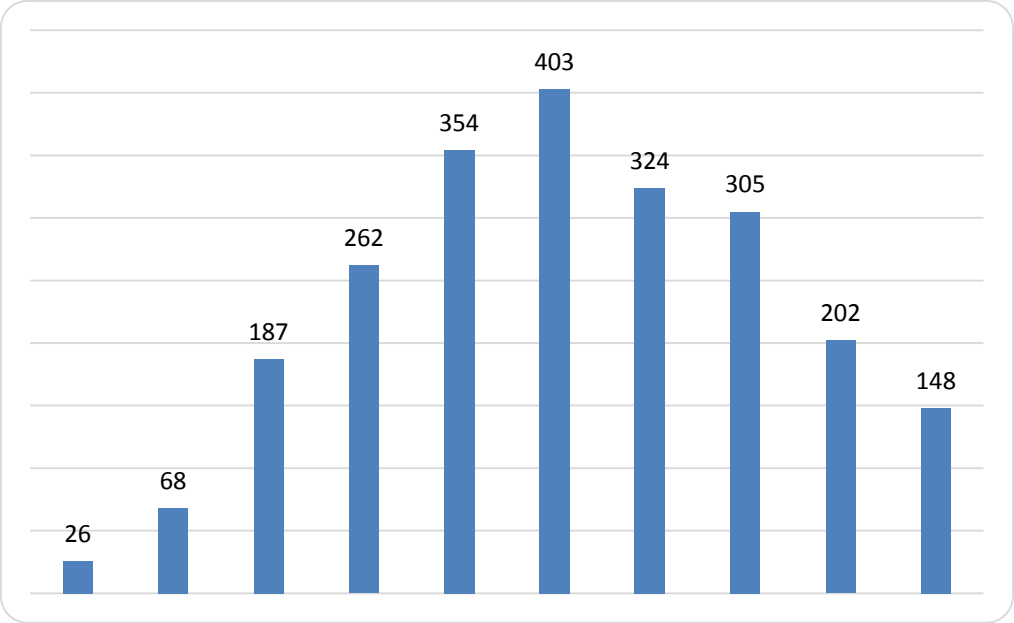

Figure 1. Amount of accepted students in RTU according to their CE results in 2014.

Regardless of the CE results, lecturers of the RTU Department of Engineering Mathematics, starting the new academic year, themselves evaluate the level of knowledge of Elementary Mathematics of their future students. On first lecture of Mathematics, first year students are given tests, which consist of 5 simple tasks: operations with shares, variable expression of the linear relationship, value calculation of algebraic function and basic properties of the logarithmic function. Each task is evaluated with 2 points. The work is considered failed if the evaluation is under grade 4. Average mark this academic year in the test of elementary mathematics is only 4.5. Grade division in 2014 is seen in Figure 2 and amount of failed in the last 6 study years – Figure 3.

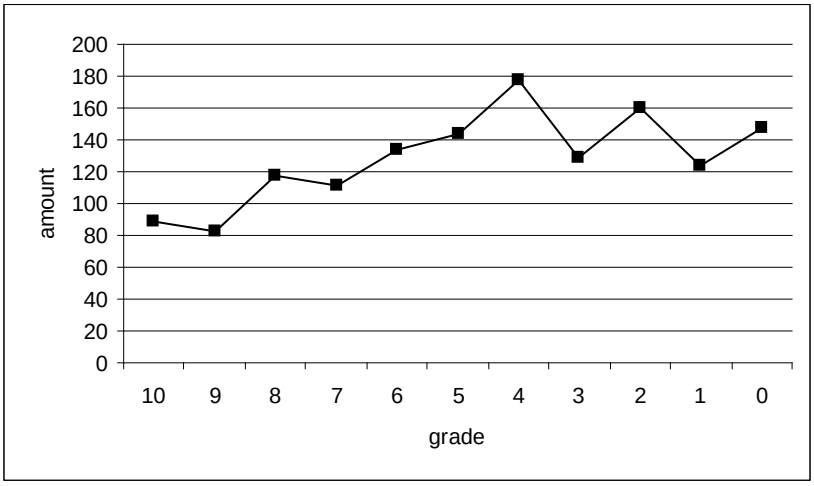

Figure 2. The division of grades in the test of Elementary Mathematics in 2014.

As it is seen from the Figure 2, in the last year the greatest maximum is on the grade 4, which is comparing good result, because, in the previous year it was 2, but one more year ago, it was 0.

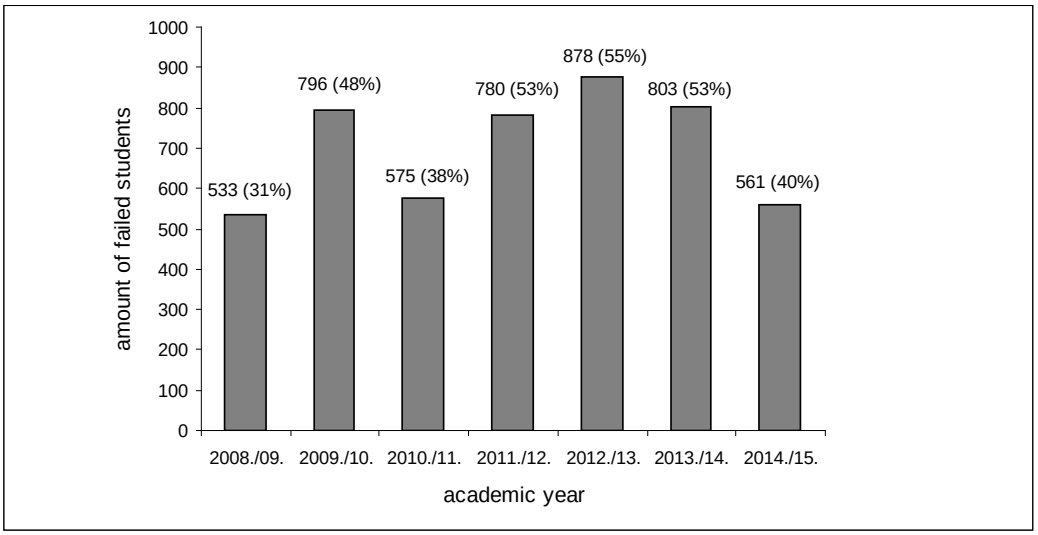

Figure 3. The amount of failed students in the test about Elementary Mathematics in the last six academic years.

Mathematics traditionally is considered one of the hardest subjects. Amount of students with low grades in Mathematics and dislike to acquire it is rising at the moment. Figure 3 shows that almost half of the students are not capable to solve even 2 of 5 assigned tasks. The results of the mathematics exam of the 1st semester show that these students are unable to acquire Higher Mathematics and successfully pass the exam.

If we take the statistics about students whose results in the centralized school exam is lower than 50 %, the situation is worse. The following data is taken from only one particular faculty, the Faculty of

Civil Engineering, about the last two academic years. This faculty in comparison to other faculties is in the middle level: the amount of accepted students with low knowledge of the elementary mathematics in no bigger or smaller. From Figure 4 we can see that division is almost equivalent: 38 % of these students passed the exam, 30 % failed it, 32 % did not come to the exam at all. Of course, the higher the level in CE, the bigger the amount of the students that passed the exam.

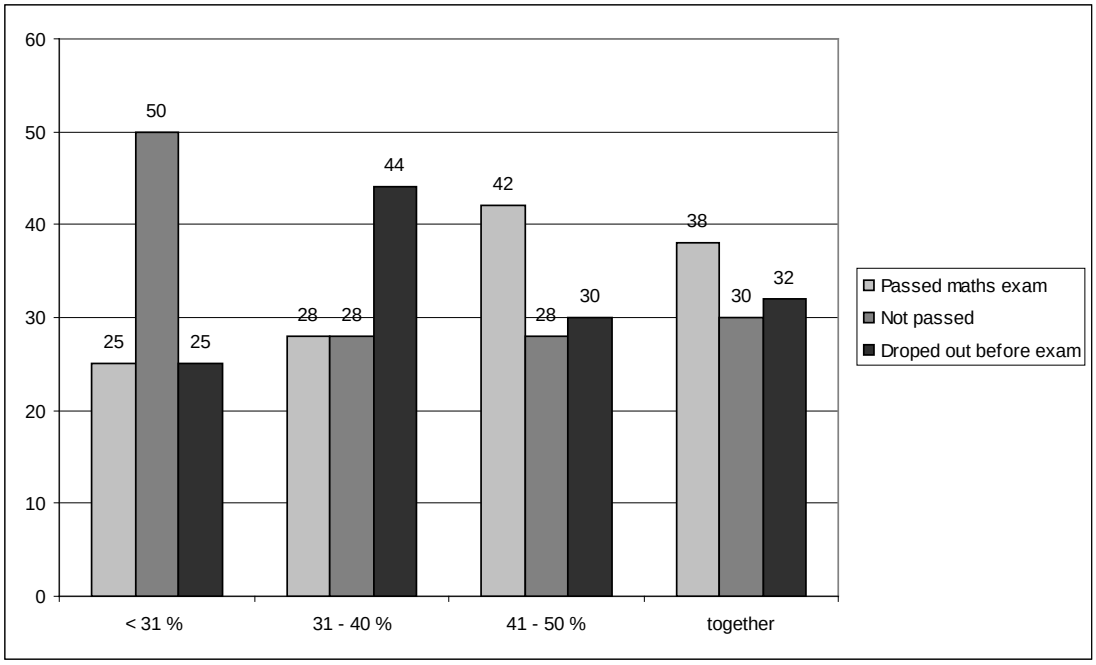

Figure 4. Summary of the results in the exam of mathematics in semester 1 (in percentage) for students of the Faculty of Civil Engineering, whose level of CE is lower than 50%.

The situation in whole RTU is also quite unpromising.

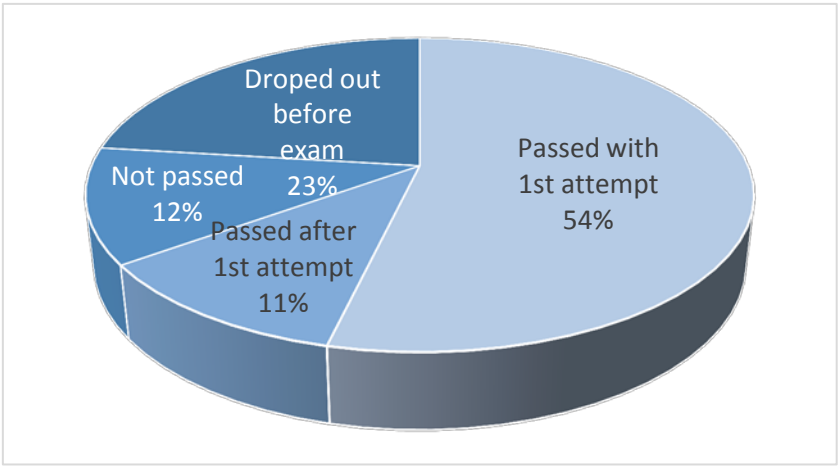

Figure 5. Results of the mathematics exam of the 1st semester in RTU.

Figure 5 shows the results of the mathematics exam of the 1st semester in RTU in the previous academic year (Birzniece, 2014, 5459-5463). As it is seen from the Figure, only 54 % of the students pass it with the first attempt, 11 % pass it after several attempts, 12 % do not pass it at all. But, the greatest worry is about 23 % of students who do not take the exam at all. Those are the students that decide to leave RTU before the first session, mostly because of these three reasons: 1) students have entered several universities and choose on the university, not RTU; 2) do not like studies, are not interested; 3) studies are too difficult and they are left before the session. Save these 23 % of students are almost impossible, but, we can try to save at least part of those 12 %, who try to pass the exam.

For several years we have been searching the solution to this problem: how, as far as possible, help these students?

Searches for solution of the problem

The greatest problem is not connected to the fact that pupil (student) cannot acquire mathematical knowledge or skills, but to the fact that he or she does not want to acquire them. To avoid academic failure, universities have to make studies of Mathematics more attractive, as well as, improve those insufficient knowledge that student has not acquired at school. For this purpose Department of Engineering Mathematics in cooperation with RTU Study Department:

- organized intensive Mathematics course before the beginning of the academic year;
- in cooperation with RTU Department of Information Technology created a course of video lectures;
- worked out new study subject „Basic parts of Elementary Mathematics".

We will tell about each activity.

Intensive courses of Mathematics

In August, 2014, RTU Study Department organized and Department of Engineering Mathematics led a week long free courses of Mathematics. Offer to attend these courses were sent out to 200 students, whose CE evaluation in Mathematics was below 30 %. Though, as it was mentioned before, a great part of students do not want to acquire Mathematics, so, only 48 students responded to the offer, but, in reality, even less students attended them regularly – only 28.

After the survey these courses were valuable to them, thou, the test of elementary knowledge of Mathematics successfully passed only 8 of the participating students of the course. We can conclude that a week long courses are undoubtedly useful, but not enough for revision of all topics of school Mathematics.

Video lectures

Experience shows that it is much easier to study if you have gathered good basic knowledge in sciences. The main problem for students is the great amount of revision material, that is why, it is necessary to successfully organize both use of visual consumables, and positive interpersonal atmosphere, that would result the cognitive greed and willingness to get results in students. To ease the process of revision for students, a great attention is paid to the use of visual materials. That is why in the spring of 2014, by suggestion of Study Vice-Rector of RTU, lecturers of Department of Engineering Mathematics created a course of video lectures of Elementary Mathematics, which consists of 43 5-18 minutes long video lectures. Technically filming the video lectures, treatment and downloading them in the INTERNET provided colleagues from RTU Department of Information Technology. Lectures are available in YOUTUBE by the address in bibliography (RTU Mācības, 2015).

Statistics show that in total these video lectures have been watched more than 3000 times, the most in the beginning of September. Very much possible that increased interest about them was exactly after the test of Elementary Mathematics.

Mentioned study videos not only allow students to revise the topics of school Mathematics, but also they help secondary school pupils to prepare for studies at university. During the preparation of these lectures, practical testing of these methodological materials was carried out, paying special attention to improvement of methodology of mathematical acquisition.

Study subject „Basic parts of Elementary Mathematics"

Another way to revise the topics of Elementary Mathematics for RTU students is to choose the subject „Basic parts of Elementary Mathematics". It is a 2 KP subject, supposed for students having problems with Elementary Mathematics. For now it is taught only to part time students, a lot of whom have

finished secondary school several years ago. Experience shows that it is easier to for students to acquire the course of Higher Mathematics after finishing this course.

Results and discussion

Adult learning nowadays gradually becomes a lifestyle. Analyzing statistical data of employment and their correlations with educational level in European countries, we receive confirmation that a wholesome realized studying throughout life secures fruitful action in Professional and social fields of the personality. As the role of Mathematics increase not only in scientific– research work, but also in study work, working with different computer programs, great attention in study programs of Mathematics in universities must be paid to the quality of studies of Mathematics.

That is why it has been an actual question recently, how to motivate students to an active action, improve the understanding about the significance of Mathematics in everyday life and role of Mathematics in other scientific, social and personal developments. Can Mathematics become understandable? That depends on teaching Mathematics that includes several factors, the most important of which is a teacher in the process of teaching mathematics. That is why the aim is to choose teaching methods that are contributory to cognitive process, that develop both skills to study, and use the knowledge creatively. To provide teaching process suitable to nowadays, lecturers must use the newest teaching methods and technical teaching tools in their work. It requires „non-stop improvement, enlargement of basic knowledge and perfection of basic skills, non-stop development of them, education always and everywhere" (Šmite, 2004, 92).

Teaching materials of the studies is advisable to visualize as much as possible, giving opportunity to see the material both as a total, and in parts. Parallel to task solving example, grounds of theory and explanation must be given. Student, who combines studies with work and is able to attend only part of offered classes, wants to receive short and specific information, his or her attitude towards homework is negative, but he or she wants to receive the materials that are suitable for independent work – concise, understandable, with ready examples to solve the task. To create interest, lecturer must not only be knowledgeable, but must know how to organize lecture so that students are not bored, they do not lose attention. Nowadays pedagogy suggests that interaction between lecturer and student is the most important part that involves psychological and practical preparation for the action, realization of the action and evaluation. The professionalism of the lecturer is hidden in the ability to choose such teaching methods that rise activity in students and creates positive atmosphere during the learning process. During the process of changes in the education, the methods that are used by the lecturer have more significant role than study programs and workbooks, because newly worked out study program, workbook or study computer program does not promote the quality of education, if lecturer does not have the needed skills to use them.

To find out the opinion of students, there is a system for students' surveys created, where students evaluate the quality of every RTU study subject and the work of lecturer in the auditory. This information allows evaluating objectively teaching methods, study materials, lecturers and carrying out the necessary improvements

Information amount increases in every science field, that is why, university can no longer give all the necessary amount of knowledge, skills and abilities that will be required throughout the whole work life. The tasks that the new specialist will have to solve must be taken into account – finding workplace, ability to adapt in the workplace, make career independently, in the case of failure, the ability to change jobs. That is why an actual problem of pedagogical process is to optimize the relationship between the ready knowledge and student's own revelation, so that student from three possible roles – *consumer, observer, and participant* – would choose the last one (Kangro, 2006, 115-128). Those long-lasting and universal skills and abilities that would be useful in different life fields should be anticipated during the planning of the studies, and such qualities should be created in the new engineer that are characteristic to acquired profession and that help to be competitive in the labor market.

Conclusions

- Nowadays studies are characterized by the change of attitude both from the lecturer, and the students, both to the content of the studies, and study process. It requires lecturer's elasticity and effective ability to combine teaching methods, as well as, personal interest in acquisition of Mathematical skills of every student.
- Authors' created and tried out in practice video material helped students to understand separate mathematical questions, gave support for independent work in acquisition of Mathematics, helped prepare for Mathematics tests and as a result, promoted students' motivation for active acquisition of Mathematics.

Bibliography

1. Šmite A. (2004). Izglītības iestādes vadība I daļa. Pedagogs. Organizācija. Pārmaiņas. (Manegement of educational institution Part 1. Pedagogue. Organization. Changes). Rīga, RaKa, Latvia. 256 lpp. (in Latvian)
2. Kangro I. (2006). Studentu matemātiskās domāšanas izpētes teorētiskie un praktiskie aspekti. (Theoretical and practical aspects of the research of students' mathematical thinking). LU PPI zinātniskie raksti: Vispārīgā didaktika un audzināšana. (Red.: prof. Dr. habil. paed. Irēna Žogla, vietniece prof. Dr. philol. Ilze Kangro) Rīga: Izglītības soļi, Latvia, 115.–128. lpp. (in Latvian)
3. Birzniece I. (2014). Making Higher Mathematics Accessible: Experience from Riga Technical University. Proceedings of ICERI 2014 - 7th International Conference of Education, Research and Innovation, Spain, Seville, 17-19 November, 2014. Seville, pp. 5459-5463.
4. RTU mācības. [online] [02.02.2015.]. Available at http://www.youtube.com/results?search_query=rtu.emacibas.lv

Opportunities of Studying Engineering in Latvia University of Agriculture with Low Basic Knowledge in Mathematics

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Abstract: Mathematics in engineering studies is one of the basic subjects not only providing the knowledge of the calculations for different processes, but also developing cognitive and problem-solving skills. At the same time, mathematics is one of the subjects causing a large number of dropout students in engineering programmes. It is not a secret that one of the reasons is insufficient secondary school level mathematical knowledge. In order to increase the opportunities for students with insufficient knowledge of secondary school level mathematical knowledge to study engineering, the research was carried out in the Department of Mathematics of the Latvia University of Agriculture (LUA), in which, firstly, the test was organized on mathematical concepts, secondly, the correlation was calculated between the grades of the centralized secondary school exam in mathematics and, thirdly, mathematical concepts receiving the lowest results were identified. As one of the possibilities to improve mathematical knowledge, remedial mathematics courses were offered to students. The other option was the design of summaries of the necessary mathematical topics and the creation of a reference to the summary of each specific topic of higher mathematics. Higher mathematics entitles students to solve individual tasks; therefore students have an opportunity to use the teachers' advice for solving individual tasks twice a week. Results of the research showed their attitude of students towards the use of the possibilities offered as well as a correlation between attendance of the remedial course and the results of studies in mathematics.

Keywords: higher education, students' independent studies, individual work, IT tools, e-studies.

Introduction

The Bologna Process was introduced in the member states of the European Union in 1999 with the aim of creating a European Higher Education Area. Existing evidence on the impact of the Bologna reform on higher education enrolment and drop-out rates is limited. The introduction of the Bachelor degree has no significant impact on enrolments or drop-out rates for most subjects, however, significantly negative effects of the Bachelor implementation on enrolments for the subjects of electrical, mechanical and industrial engineering as well as for physics (Horstschräer, Sprietsma, 2010).

The Bologna process suggested that having shorter time for obtaining degrees would result in decreased dropout rates. While there has been a decrease in dropout rates in the humanities and language programmes, this has not been the case in the mathematics programmes. For example, it was found that in Germany, in mathematics (and mathematics-related fields) there was an increase in dropout rates. Currently, about 20% of students who begin a program fail to complete it; however, for students of mathematics-related fields, that number jumps to more than 30% (Fox, 2010). Also at the Latvia University of Agriculture (LUA) more than 30% of students from engineering specialties drop out just after the first year of studies in which mathematics is one of the basic subject.

Mathematics is a background discipline for specialists who work in many fields of any industry, especially in engineering. The content of mathematics for universities is determined by the European Society for Engineering Education (SEFI) (Booth, 2004). Mathematics is not only the basis of other subjects, but also it is a tool for analysing and solving problems that occur in the world at large. Many specialists see mathematics as something which co-exists with other areas of knowledge and supports the study and development of that knowledge.

Research results of several authors indicate that mathematics in schools and universities does not always provide a solid foundation of knowledge and skills for further studies. Mathematics often

contains a consecutive amount of facts that must be memorized and reproduced. It is a fact that often the so-called "school mathematics" and mathematics needed in different life situations are not related (Zeidmane, 2011). Some important factors that affect the development of mathematics' education in universities should be mentioned. First, there is a demand for highly qualified employees. Second, the content of mathematics course has not changed for many years, although the number of ECTS has reduced. Third, there is an increase in the number of students who have insufficient knowledge of natural sciences and poorly developed cognitive abilities. The problem in mathematics study process is students' disability to make a long chain of logical conclusions in order to acquire large pieces of information. Students would like mathematics to be more understandable and more suitable for practical use in adult living (Balciunas, Macaitiene, 2011).

In the 17th SEFI seminar, "Mathematical Education of Engineers" it was noted that many beginners in mathematics, natural and engineering sciences as well as in economic sciences have big problems starting their studies because of their lack of mathematical competencies. Thomas Schramm (Schramm, 2014) pointed out, "Neither ignoring nor waiting for better students' help, nor one-week preparatory crash courses. So, a lot of different programs are under way to mitigate the situation. Since we all have the same problems there is a high potential for concentration, standardization and most important for cooperation." The seminar offered some solutions. The TU9, the German association of nine technical universities, decided to support a project building up an online-eLearning platform on the basis of this common standard including a self-assessment of the students. In Baden-Württemberg colleagues from schools and universities developed a catalogue which defines the minimal standard of mathematical skills needed to begin the above mentioned study programmes.

Similar problems are also faced by the Latvia University of Agriculture, in particular, engineering study programmes. In order to fill state-financed places, the university should admit students with unsatisfactory mathematical background knowledge.

The aim of this research was:

- to investigate the current situation at the Faculty of Information Technology of the LUA, to determine the real level of mathematical knowledge, organizing the test for the 1st year engineering students on secondary school level in mathematics, identifying topics in mathematics with lowest results;
- to find the way to provide assistance and support to students with insufficient secondary level mathematical knowledge;
- to evaluate the effectiveness of the solutions proposed by analyzing the results in mathematics, as well as the student's opinion.

Methodology

The problem of dropout students is topical not only in the universities of Europe but also around the world. Already in 1971 the University of Chicago developed the theoretically based model of the Undergraduate Dropout Process (Spady, 1971). The model as operationalized represents a synthesis and extension of concepts pertinent to balance theory, D.E.Durkheim's (Durkheim, 1982) theory of suicide, and the work on college dropouts. It regards the decision to leave a particular social system as the result of a complex social process that includes family and previous educational background, academic potential, normative congruence, friendship support, intellectual development, grade performance, social integration, satisfaction, and institutional commitment (Figure 1).

Although social integration, satisfaction, and institutional commitment can be explained primarily on the basis of the intrinsic rewards associated with intellectual development, the dropout decision is largely influenced by extrinsic performance criteria among the men but less so for the women.

Nowadays, the research is devoted to both the reasons for students leaving full-time undergraduate programmes and online programmes. Students reported leaving the program for a variety of reasons. Their reasons for leaving the online programme were organized into personal, job-related, and program-related reasons (Willging, Johnson, 2009):

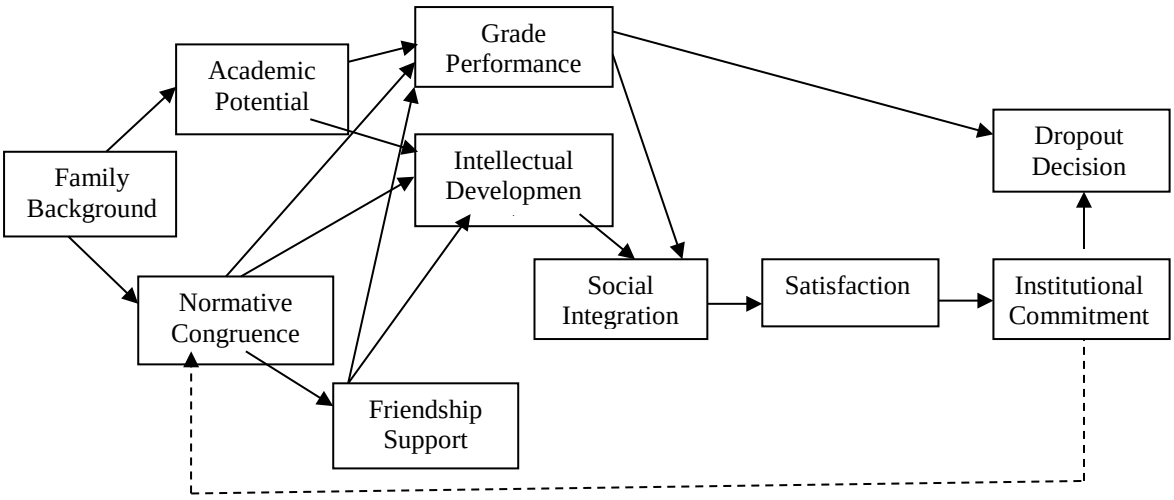

Figure1. Theoretically Based Model of the Undergraduate Dropout Process.
(author adapted from Spady, 1971)

- Personal reasons:
  - financial difficulties or the long-term financial investment not worth the benefit;
  - lack of time to complete the assignments, which took more time compared to traditional courses;
  - schedule conflicts;
  - family problems;
- Job-related reasons:
  - job responsibilities changed during the program;
  - their company didn't support the program;
  - too hard to work full-time and be a student in an online course;
- Program-related reasons:
  - too many low level assignments;
  - too difficult working on the group assignments;
  - lack of one-to-one interaction with the instructors and students;
  - the academic program was too difficult / demanding;
  - lack of interest in the material or the program didn't meet expectations;
- Technology-related reasons:
  - the learning environment was too de-personalized;
  - not enough support from the technical staff;
  - the technology overwhelmed the content;
  - lack of technical preparation for the program.

As regards the Latvia University of Agriculture, the largest number of dropouts happens in the first year. In order to reduce the number of dropout students, the Faculty of Information Technology carried out the survey among students during the first semester once a month. The results showed that that many students had chosen specialty in the last moment and knew very little about the chosen profession.

The research was carried out in the Department of Mathematics of LUA. The analysis of the achievement of 94 first-year "Computer Control and Computer Science" and "Information Technologies for Sustainable Development" study programmes students in mastering "Mate-1" course was carried out.

The following methods of research were used: the survey, descriptive statistics and correlation analysis with Spearman', Pearson' and Kendall's coefficients.

Results and discussion

In order to increase the opportunities to study engineering with insufficient secondary school level mathematical knowledge, the research was carried out in the Department of Mathematics of the Latvia University of Agriculture. The test was organized on elementary mathematical concepts. The test results of students from the Faculty of Information Technology are shown in Figure 2.

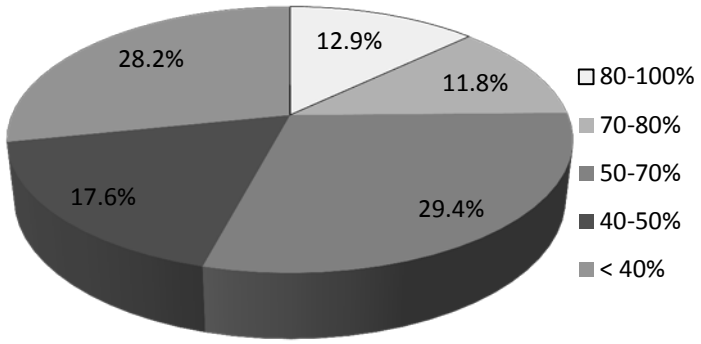

Figure2. Test results on elementary mathematical concepts of students from the Faculty of Information Technology.

The results show that only 24.7% of the first-year students have received more than 70% of the assessment score. It is disturbing that more than 45.8 % of students have received less than 50% score. This means that their mathematical knowledge is unsatisfactory. The secondary schools mathematics course contains a lot of complicated topics and students on completion of the secondary schools are supposed to take the centralized examination in mathematics. Thus a correlation was made between the results of the test on elementary mathematical concepts and the grade in the centralized secondary school exam in mathematics. There was a positive significant ($p = 0.01$) correlation between the results of the LUA test on elementary mathematics concepts, the grade in centralized secondary school exam in mathematics $r_p = 0.82$ and the grade in mathematics in secondary school $r_s = 0.65$ (Table 1).

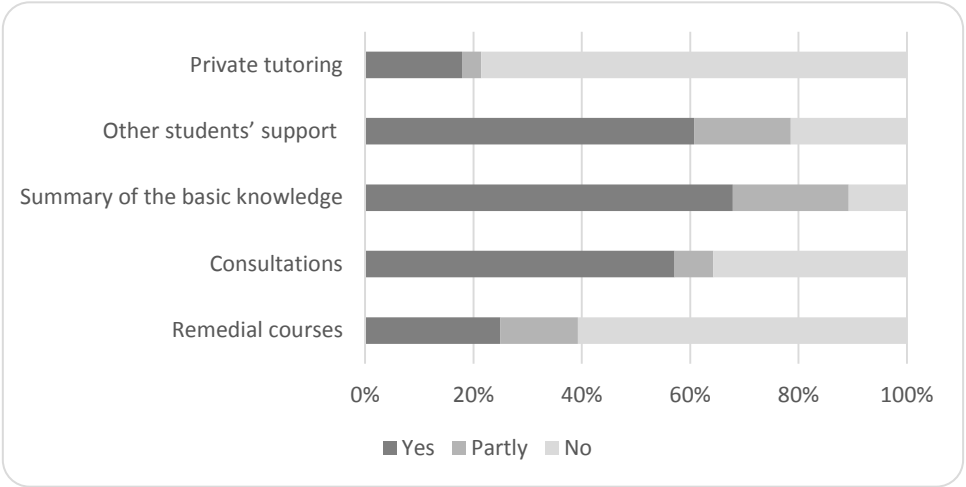

Figure 3. The students' opinion regarding factors helping to improve their mathematical knowledge and achieve higher level of mathematics.

As one of the possibilities to improve the mathematical knowledge, a remedial mathematics course was offered to students. Students with unsatisfactory test results, especially those with the test score less than 50%, were supposed to attend it. Unfortunately, the students' interest in these courses was very low, only 25% attended the course, as it is shown in Figure 3 (mode = median = "No"). Apparently, the students looked for the easiest and quickest ways to improve mathematical knowledge. The other option was the design of the summary of the necessary mathematical topics by

the department staff. The survey results showed that students noted most frequently the possibility of using the summary of mathematical topics for improving their knowledge of mathematics (mode = median = ”Yes”). Students also had the opportunity to attend tutorials where revision of the secondary school mathematical topics was provided in addition to the current material to support students. Tutorials and other students’ support were important to acquire a higher level (mode = median = ”Yes”). Some of students used private tutoring options (mode = median = ”No”).

In order to enhance students to acquire higher mathematics successfully, much attention was paid to the improvement of the study process. In addition to compulsory lectures and practical work, theoretical materials as well as the summary of the main concepts and problem solving techniques in e-environment for students were offered. Studying mathematics students need to solve individual tasks therefore students have the opportunity to use teachers’ advice for solving individual tasks twice a week. The computer algebra program MathCad is integrated in the mathematics study process. Students must check their solutions of individual tasks step-by-step with Mathcad programme in the computer classes. Step-by-step examples of practical mathematics problem solutions with MathCad were designed in e-environment. Students admitted that task solution examples in Mathcad helped to solve the independent work step-by-step, because 1) the results were comparable, 2) solution process of examples in MathCad is similar with the practical task solution on paper. In order to acquire material better, theory tests were offered in e-environment as well.

The results of the survey “What helped to acquire mathematics study course?” showed that students considered that practical exercises and solutions for individual tasks had the greatest significance for studying higher mathematics though they did not underestimate the importance of lectures as well (mode=median=”Yes”). The summary (didactic material) was more effective (mode=median=”Yes”) than theoretical materials, solution examples with Math Cad and theoretical tests (mode=median=”Partly”) in students’ opinion. (Figure 4).

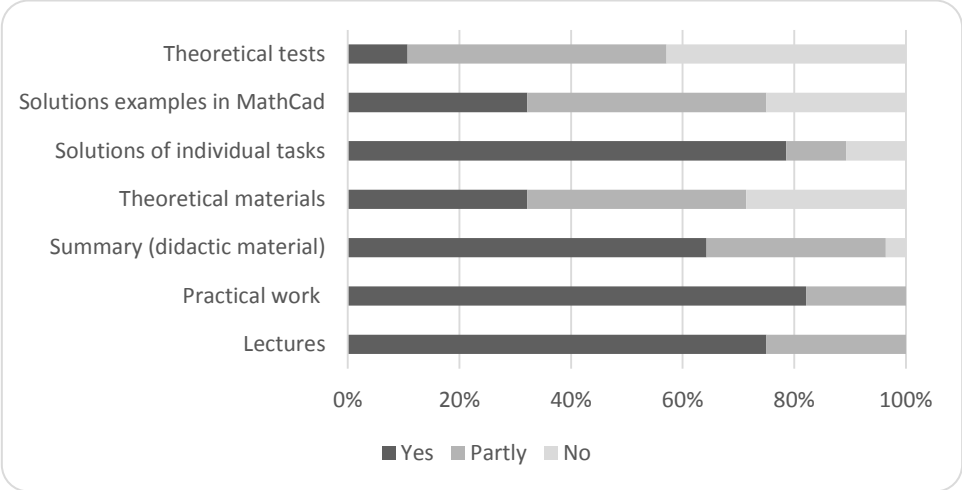

Figure 4. The students’ opinion regarding factors helping to acquire mathematics study course.

The students’ needs of the mathematics revision course is significantly correlated (Kendall's $\tau = 0.52$; $p<0.001$) with the importance of theoretical didactic materials for higher mathematics studies and vice versa. Didactic course materials were more necessary for students that chose the remedial course. The summary of the mathematical topics and “Mate-1” summary (didactic material) have the same importance for students (Kendall's $\tau = 0.54$; $p<0.01$). The more successful students were during the “Mate=1” course, the less important they considered tutorials (Kendall's $\tau = 0.55$; $p<0.01$) and other students’ support (Kendall's $\tau = 0.53$; $p<0.01$).

Despite all the offered opportunities, 23.4% students failed in mathematics, 7.4% of them due to the lack of the background knowledge. Other 15% of students had sufficient mathematical knowledge, but they received unsatisfactory grade in the mathematics study course because the students did not comply with any of the requirements.

The analysis of the achievement of successful students (n=67) in mastering "Mate-1" course on the basis of the school training was carried out. The grade of the LUA study course "Mate-1" significantly correlated with the grade of the secondary school. Hence the success of the development of mathematics depends essentially on the knowledge and skills acquired in the secondary school (Table1).

Table1.

The results of correlation analysis: Spearman's coefficients (r_s); Pearson's coefficients (r_p)

n = 67; p = 0.01	**Grade in mathematics in secondary school (score)**	**Grade in centralized secondary school exam in mathematics (%)**	**Test on elementary mathematical concepts (%)**
Grade in the centralized secondary school exam in mathematics (%)	$r_s = 0.62$		
LUA test on elementary mathematical concepts (%)	$r_s = 0.65$	$r_p = 0.82$	
Grade in the LUA study course Mate-1 (score)	$r_s = 0.63$	$r_s = 0.68$	$r_s = 0.74$

The results of the LUA test of unsuccessful students (n=7) and students who left their studies (n=15) show a significant positive correlation with the achievement of the centralized secondary school exam, accordingly r_p=0.73 (p=0.03) and r_p=0.52 (p=0.03). The assessment of mathematical knowledge at the university does not correlate with the school assessment knowledge and the results of the LUA test of these students. It means that there are other reasons for the failure.

Conclusions

- The problem of the growing number of dropout students is topical for all universities. It is necessary to identify the reasons for the tendency, although reasons among universities may vary. But one of the main reasons, especially in engineering specialties, is insufficient mathematical competence.
- The success in the study process of mathematics depends essentially on the knowledge and skills received in the secondary school. There is a positive significant correlation between the results of the LUA test on elementary mathematical concepts, the grade in the centralized secondary school exam in mathematics and the grade in mathematics in secondary school.
- To improve the insufficient mathematical knowledge, remedial courses in mathematics were offered to students, the summary of the necessary mathematical topics was designed, the opportunity to attend tutorials was offered. Students also used the support of better students and private tutoring. Unfortunately, the students' interest in remedial courses was very low (mode =median="No"). According to the students' opinion, the summary of the mathematical knowledge was the most useful method for improving their knowledge of mathematics (mode =median=" Yes"). Tutorials and other students' support were important for acquiring a higher level (mode = median =" Yes"). Some of the students used private tutoring options (mode = median = " No"). Apparently, the students looked for the easiest and quickest ways to improve their mathematical knowledge.
- Much attention was paid to the improvement of the study process to enhance successful acquisition of higher mathematics. The analysis of students' opinion shows that practical exercises and solution for individual tasks as well as lectures were useful for mastering higher mathematics.
- Assessment of knowledge of mathematics at the university does not correlate with the school assessment knowledge and the results of the LUA tests for unsuccessful students. For 64% of the students it was not related to the lack of background knowledge in mathematics. It is possible to conclude that the main cause of the failure in the study course of mathematics,

however, was students' attitude toward learning, the failure to observe deadlines as well as the inability or unwillingness to learn. Those who wanted to learn and use the support passed mathematics successfully.

Bibliography

1. Balciunas S., Macaitiene R., Virgailete-Meckauskaite, Vintere A., Zeidmane A., Paulins N. (2011). Development of Mathematical Competencies in Higher Education Institutions within Socio-Economical Context. Publishing House of Siauliai University, Lithuania.
2. Booth S. (2004). Learning and teaching for understanding Mathematics. In: Proceedings *Vienna University of ethnology* (12th SEFI Maths Working Group Seminar), pp 12-25.
3. Durkheim D. É. (1982). The Rules of Sociological Method, Preface to the Second Edition, trans. W.D. Halls, The Free Press, 1982,ISBN 978-0-02-907940-9, p.45.
4. Fox H. (2010). Study finds stress leads students to drop out of new bachelor programs. DW-Word.de, Deutsche Welle.
5. Horstschräer J., Sprietsma M. (2010). *The Effects of the Bologna Process on College Enrollment and Drop-Out Rates*. ZEW - Centre for European Economic Research Discussion. Paper No. 10-018. [online] [07.01.2015] Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1589543
6. Schramm T. (2014). A minimum requirement catalogue for beginners - Using technology for supporting and testing students. The 17th SEFI MWG Seminar *Mathematical Education of Engineers.* [online] [05.01.2015] Available at http://sefi.htw-aalen.de/Seminars/Dublin2014/17th SEFIMWG Seminar/Monday Session 1/Thomas Schramm Abstract Only.pdf
7. Spady W.G. (1971). Dropouts from higher education: Toward an empirical model. *Springer Link*, Volume 2, Issue 3, pp 38-62. [online] [05.01.2015] Available at http://link.springer.com/article/10.1007/BF02282469#page-1
8. Willging P.A, Johnson S.D (2009). Factors that Influence Students' Decision to Drop out of Online Courses. *Journal of Asynchronous Learning Networks*, Volume 13 (Issue 3), pp. 115 - 127. [online] [11.03.2015] Available at http://files.eric.ed.gov/fulltext/EJ862360.pdf
9. Zeidmane A. (2011). Importance of Math Studies in Engineering Education in Assessment of Employers. *Journal Teacher Education. Research Works*, Vol. 16 (1), pp. 33-39.

Foreign languages for professional and academic purposes

Autonomous English Acquisition in Blended e-Studies for Adults for Sustainable Development: Transformation of Values

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Abstract: The topicality of the research "Autonomous English acquisition in blended e-studies for adults for sustainable development: transformation of values" arises from the complexity of holistic paradigm of sustainable development and cohesion of environmental and human sciences. The aim of the research is to check and realise the synergetic systemmodel for facilitation of transformation of values towards English acquisition in virtual learning environment. Theoretical analysis of the topic shows that the paradigm shift towards system approach in science has resulted in using different systemmodels in education. The whole of the third level system, the place of autonomy in it and didactic models for transformation of values are analysed in the research. The appropriateness of synergetic systemmodel and synergetic research methodology for the process of changes is proved in the theoretical part of the research. Methodological principles of synergetics, two submethods depending on the point of bifurcation and three perspectives of observation are used in the research. Practically, the integration of vertical values of responsibility is established by the survey in the group of English acquisition programme of adult non-formal education. The facilitation of horizontal values of developing of language skills, English acquisition skills and experience in four steps for realisation of the model are described and used in active research. They are: investigation of the group, determination of sensitive factors for facilitation of the transformation of values, *strong sides, weaknesses, opportunities and threats* (SWOT) analysis for realising and removing threats for full use of given opportunities, facilitation of the transformation of values by promoting determined sensitive factors. Weaknesses were excluded during quantitative research factor analysis. Determined sensitive factors are: the most understood factor of skills and the less understood factor of participation. The research resulted in working out practical means for facilitation of the transformation of values towards English acquisition in virtual learning environment. Substitution of traditional synergetic approach with minimum teacher's influence on transformation of values with facilitation of new formations of values followed from sensitive factors expresses the significance of the results of the research.

Keywords: autonomous English acquisition, synergetic systemmodel, sensitive factors, adult education.

Introduction

Results of the research on autonomous English acquisition in blended e-learning for adults for sustainable development are descibed in this article. The hypothesis of the research is that in autonomous English acquisition in blended e-learning for adults transformation of values towards self-organised English acquisition in virtual learning environment occurs on the basis of criteria of responsibility and/or on the basis of methodological criteria.

The research aims to create and check the model for facilitation of the transformation of values from directed English acquisition in classroom environment to self-organised acquisition in the Internet supported learning environment. Tasks of inquiry of the experience of self-regulated and self-directed English adult learners' readiness to autonomous English acquisition in blended e-learning and possibilities of facilitation of transformation of values in active research were implemented. The process of the research and results of its parts have been described in several articles (Bojāre, 2011a, 2011b, 2012, 2013, 2014; Bojāre, Ignatjeva, 2014).

Methodology

The research is based on the system approach. In general, the system includes the whole of the world organisation. In education it can mean the system of its formal organization; its self-organisation in

virtual learning environment; relationships between its participants and the environment in the process of learning; the whole of the student's body, heart and mind, and integrative whole of his/her intellect, emotions and will. Learning for self-integration in sustainable society reflects nowadays values – integrative personality, sustainable society and technologically supported environment. The values should be implemented by becoming, doing and learning.

Transformation of values is required at adult student's microlevel in the process of autonomous English acquisition in blended e-learning of non-formal education as macrolevel for its self-organisational acquisition in the Internet supported learning environment as a meso-level. The student's learning is seemed as the whole of self-regulated learning (SRL), self-directed learning (SDL) and self-determined learning.

The design of the research follows from the assumption of an individual's creative development in and with the environment (Laszlo, 2004). According to it, the concept of autonomy has developed from physical autonomy to autonomy of personality at emotional level and autonomy of consciousness at psychological level. All together they connect learning with creative decision making, self-regulation, self-determination and self-direction in the general process of multidirected evolution.

The system approach started with Ludwig von Bertalanffy's (1968) General System Theory (GST) and has caused the paradigm shift in science, including social sciences (Давыдов, 2008). Historically, the whole of the first level physical system in education consists of different parts; a part of the second level energetical system reflects the whole; the parts are connected in open synergetic system of the third level.

The autonomy expresses the learner's autonomy, the autonomy of personality and psychological autonomy of the consciousness there. The aim of learning develops from acquisition of universal knowledge, skills, attitude and values to the special and the general. The teaching method of directed transmission of knowledge, facilitated self-directed learning and creative self-organised learning corresponds to that.

The learner's identitity develops from directed Self to self-directed Self and to We identity according to paradigm shift fom the teacher's centred to learner's centred learning process. Object-subject and subject–subject relationships reflects the doer in the action.

The researcher determines the system of the research, where V.G.Budanov (Буданов, 2007) introduces the perspectives of observation of the systems. The perspective of metaobservation by exposing the point of bifucation supplements with the dimension of quality of changes and shows their direction. It allows to use dynamic system approach instead of statistic and linear investigation of systems in educational research.

Three didactic models based on actualisation of values are realised by system approach in education: cybernetic, synergetic, and holistic didactic model. The first reflects the flow of investments (Parkin-Obe, Johnston, 2004) to the learner, for example, programmes for unemployed, and communicative flow to the educator. The second – the flow of investments to educational programme and communicative flow to the learner. A holistic didactic model should ensure the flow of investments and communication in both directions and it means to achieve the learner's participation and integration in the holistic model of education for his/her creative development in and with the environment.

Graphically the cybernetic model is showed by A.Broks (2000), the open third level systemmodel (Liepa, 2011) is appropriate for a synergetic model and an integrative model – for reflecting a holistic model. Generally, the first reflects the aim, levels and the flow of investments; the second - the structure and the process; the third - the structure and functional connectness of its parts. The functionality expresses the levels of learner's development in education: directed learning, autonomous learning and co-learning of autonomous learners.

Self-investment into one's own education is substantiated by K.Rogers (Роджерс, 2004) and supplemented with the learner's investment in developing of English acquisition methods for fulfilling of communication needs of the society in this research. So the synergetic didactic model is used for

socially and technologically facilitated learners' self-integration in learning environment in this research.

A supportive method of education was actualised by O.F.Bolnov (Больнов, 1999), recommended by V.G. Budanov (Буданов, 2007) as synergetics for education and investigated by Marulevska (2011). It facilitates holistic education the aim of which is an integrative personality and integrative skills (Parkin-Obe, Johnston, 2004) for complex and sustainable development.

Transformation of values is based on strong outside influence in a cybernetic model and on minimum influence on the learner in traditional synergetic model. Substitution of influence by facilitation makes it suitable for facilitation of the transformation of values that stresses self-integration into learning environment by developing learning skills towards autonomous content acquisition using technologies and partcipation in learning community and society.

The synergetic model of the research is shown in Figure 1. It reflects to the concept of the research based on developing of the learner's learning experience according to the paradigm shift from the value of directed learning, to self-directed learning and meta-learning (Figure 1).

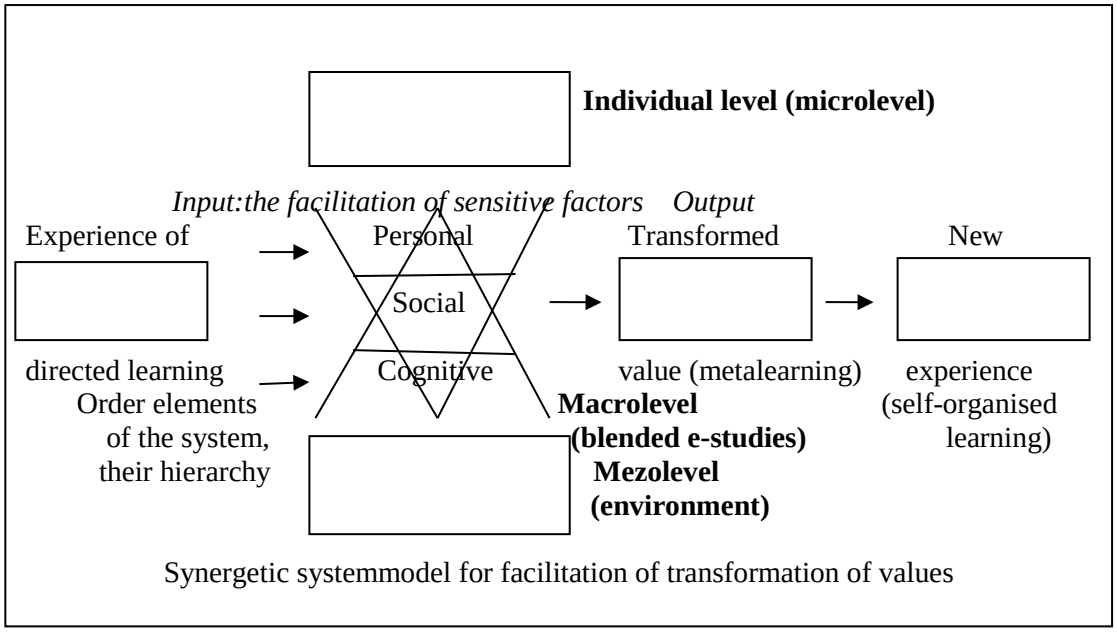

Figure 1. Synergetic system model for facilitation of transformation of values (Bojāre, 2014).

Autonomous English acquisition in blended e-learning is an organisational form of changes. Its features are outside stability and inside nonstability where the learner's self-experience develops by creation of a new value in the process of inside resonant of methodological factors and outside transformation of levels of responsibility. Organisational forms of the learning process based on different levels of responsibility for the learning process correspond to dimension of vertical hierarchy but methodological strategies of English acquisition - to horisontal dimension.

The methodological strategies express parameters of order in the process of transformation of values. The personal factor, the factor of involvement, the factor of organisation, the factor of evaluation, the factor of knowledge, the factor of skills and the factor of development were exposed by factoral analysis during the quantitative research.

In general, the model is analytical, sequenced, integrative, reliable and valid, because reflects to the theoretical background. It is complex and hierarchial because it has several levels; *dynamic* because of including the factor of time expressed by previous and new experience; *structural* and *procedural* because it shows the structure of the fenomena and the possibilities of its realisation; synthetic because it syntheses the inside and outside; structurally economical and capable to create (produce) the new experience.

The model actualises creating means for determination of the learners' psychological readiness for practical activities in the future on the bases of self-reflection and means for pedagogical implementation of the model. Methodological principle of synergetics, two submethods depending on the point of bifurcation and three perspectives of the observer are used in the research. The observer's perspectives are: outside metaobservation in the qualitative part of the research, outside mezoobservation in the quantitative part of the research and inside microobservation in active research.

One of the clear synergetic concepts is the point of bifurcation – the moment in which the complex structure has a choice of evolutionary motion forward. The development of the self-organization mechanisms lead to quality changes in human personality as a complex, non-linear dynamic systems. It is open to interaction and to information exchange with the environment. The self-development process in the educational activity could be realised on the basis of integration of the content side, the interaction on the process side (Marulevska, 2011).

It includes the transformation of values. Exposing and not exposing the point of bifurcation makes two submethods of synergetics. It is not exposed in pedagogical part of the research, and it is exposed in the quantitative part of the research as psychological readiness to self-learning of English. Readiness means the causality of the possibility of complex self-developing system to turn into reality (Степин, 2003). It is mathematically observed and special principle of its creation – the principle of non-linearity, openess and non-stability are also the necessary and sufficient conditions of its realisation. Informative structural codes (indicators) of experience fix its important ways of relationships with the environment and renewal of the whole of the system.

The research methodology is based on general principles of synergetics: the anthropological principle, the hologram principle, the recursive principle. The anthropological principle means *the uniqueness of the student, his valuable personality* (Marulevska, 2011) and reflects personal evolution. The hologram principle takes into consideration the whole of the system and allows *to find specific characteristics of the complex dynamic structure that are part both of its past and its future* (Marulevska, 2011). It is important for determination and facilitation of changes.

The recursive principle realizes itself in the personal self-development which is a result of the creative formation of one's own educational product. It supposes autonomy *in overcoming of the traditional metaphysic oppositions of the social culture and the individual activity; the production and the reproduction; the subject and the object; the inner and the outer side. The reproduction is structurally incorporated in the production process* (Marulevska, 2011). Autonomy in self-development includes the possibility for mastering new values, methods, competences and knowledge.

A language learner's personality is seen as a complex, open, non-linear self-developing system. Pedagogical synergetics of the process of changes is based on self-organisation of the system. Self-determination is facilitated in the process of learning. The characteristics of holistic learning process (Martin, 2003) highly corresponds to non-formal adult education because understanding of information and knowledge has been constructed in the context of one's own life.

Self-governed learning in a group and with the teacher is a practical transition form directed learning to sustainable self-organised learning in virtual learning environment where the teacher's and learner's role is changing. Transformative learning is the method of holistic pedagogy. Social-individual didactic approach is used in it; the student is an active estimator of one's own achievements; facilitation is the strategy of teaching. The process of acquisition of the content is based on creating of values; the method is modelling.

The teacher faces the task to organize an optimal environment for the interactive process of synergetic communication between the participants in the educational process. A special attention should be paid to the creation of new value of metalearning when not only self-regulated but also self-directed and self-determined learning skills in the group are developed. It is important to give learners a chance to evaluate their own English acquisition potential and invest in developing of groupmates' learning experience, too.

Results of the research and discussion

The empirical part of the research consists of the qualitative research, quantitative research and active research. Five participants were involved in the qualitative research, 210 respondents in quantitative research and a different number of participants in three cycles of the active research. The participants of the qualitative research are characterized by a rich experience of other foreign languages and they have an interest to learn English.

Nonprobability sampling of respondents was chosen for quantitative research on the base of the principle of accessibility. It consisted of volunteers who were ready to take part in the face-to-face research and the survey implemented by means of e-mails. Participants of English courses of adult non-formal education were invited to be respondents of the research, but their amount was insufficient for the research. After that teachers, librarians and parents of schoolchildren as potential participants of English acquisition courses were involved in the research.

Participants of active research were chosen depending on the results of the quantitative research. 46 participants (N_1=46) were involved in the first cycle. They were real participants of English courses of adult non-formal education. 32 of them took part in the second cycle of the research (N_2= 32), four facilitators (N_3=4) took part in the third cycle.

The questionnaires of the first cycle, 12 working lists of SWOT analysis of the second cycle and 4 SWOT analyses of the third cycle were analysed in the research according to determined sensitive factors of English acquisition. So the results of the research were obtained by making qualitative, quantitative and active research.

The method of narratives was used in the qualitative part of the research where its participants described their experience of acquisition of foreign languages. It resulted in a unique set of stories showing a person's developmental adjustment to nowadays multilingual world. The results of their content analysis were compared with European Language Portfolio for adults (Dalbiņa, Grīnberga, 2006) and used for making a questionnaire of the quantitative part of the research.

An important finding of qualitative research was a personal six-step self-actualised training model for foreign language acquisition practised by one participant of the research: singing songs in the target language, listening and repeating all the audio materials of the book for self-studies for acquisition of pronunciation, writing audiodictations using the same learning material and self-monitoring the writings with the tapescript, listening, synchronous reading and retelling all the audio texts, including dialogues, with the tapescripts; answering the questions and doing grammar exercises, activities of collaborative learning (also with native speakers if it is possible) for presenting monologues, speaking dialogues, answering questions on the texts, singing songs and speaking.

Reading books, e-correspondence, taking part in the projects, watching films, communication with foreigners in the target language may follow according to the situation (Bojāre, 2013). This model is convenient for nonprofessional and non-formal acquisition of English and other foreign languages.

The guantitative part of the research was carried out by the method of the survey. Data obtained by 5-point Likert-type *Self-directed English acquisition readiness scale (SDEARS) in blended e-studies* (Bojāre, 2013) were mathematically analyzed by 22.0 version of SPSS (*Statistical Package for the Social Sciences) programme.* It resulted in reducing the number of indicators from 306 to 126 and creating a short form of questionnaire. It can be used for practical self-evaluation of participants' and division them into groups in courses of adult non-formal education.

The main conclusions (Bojāre, 2014) are the following: (1) respondents do not distinguish different forms of organisation of learning process. Vertical values based on different degrees of responsibility for learning join in virtual English acquisition. It is associated with independent learning, causing the interest about learning strategies and enhancing values of developing of language skills, English acquisition skills. (2) Only education and professional belonging is meaningful for dividing respondents into groups. (3) Decision making depends on respondents' social and professional role and on their level of education.

Three groups were revealed by the decision making tree. Two groups preferred stable forms of learning process – learning directed by the teacher or autonomous learning, but one group had an uncertain opinion. It contained mostly participants of English acquisition programmes of adult non-formal education what was chosen for further inquiry by SWOT analysis of inquired factors for scientifically grounded facilitation of transformation of values towards autonomous English acquisition in virtual learning environment depending on learners' strengths and opportunities in facilitation of changes in horisontal dimension. It is a processual dimension of developing of language skills, English acquisition skills and experience.

The participants were inquired using a questionnaire (Bojāre, Ignatjeva, 2014) in the first cycle of the action research. It confirmed that participants of non-formal English acquisition preferred self-regulated learning directed by the teacher. After that they analysed proposed methodological factors by the SWOT analysis in the second cycle. The personal factor, the factor of involvement, the factor of organisation, the factor of evaluation, the factor of knowledge, the factor of skills and the factor of development were exposed by factoral analysis during the quantitative research. Their weakeness was removed by factoral analysis in the previous part of the research.

Working lists with strong sides of factors were prepared and participants of action research were asked to think about opportunities to use these strengths in the classroom and virtual learning and to write why these opportunities could not be used. SWOT analysis was realised in three steps: participants did that individually, in pairs and in groups. SWOT analysis was done by facilitators in the third cycle.

The validity of the questionnaire was checked, but the first interpretation of obtained data from the point of view of personality's harmonic and general development (Bojāre, 2014) did not fit exactly in the system approach. Their reinterpretation was done on the basis of sensitive factors. In general, the factor of skills (working with learning materials, developing listening skill, translation) is the most understandable factor for participants of active research. The factor of participation is a less understandable factor (choosing methods and strategies for doing the task, making tables about learned topics and grammar rules, making mind maps and layouts about learned topics and grammar rules).

It is assumed, that the paradigm shift at individual and group level can be done by strengthening competitive attractor – the factor of skills and/or by developing the factor of cognitive participation. The facilitation of factors would cause resonance of other factors and promote their transformation. So the facilitator supports developing skills of self-evaluation, construction the meaning of experience and transformation of values by developing of language acquisition competence in four steps.

They are: investigation of language learners, determination of sensitive factors for modelling transformation of values, understanding and removing threats of not using available opportunities, facilitation of competitive attractor – sensitive factor and/or facilitation of developing of less understandable metalearning as a new formation of value, for example, by making a personal model for English acquisition.

It makes a pedagogical instrument for realisation a synergetic systemmodel for facilitation the transformation of horisontal values of developing of language skills, English acquisition skills and experience where self-evaluation in using/not using opportunities allow learners to improve the quality of one's own choice (Mezirow, 2000). Sensitive factors are the criteria of becoming of the system that create the transformation of other methodological factors.

The future direction of the research is to realise the model by conducting an action research in other groups of English courses of adult non-formal education for developing research methodology and promoting self-organised English acquisition in virtual learning environment.

Conclusions

The hypothesis of the research is partially proved because in autonomous English acquisition in blended e-learning for adults the transformation of values towards self-organised English acquisition in virtual learning environment occurs on the basis of methodological criteria.

A synergetic model for facilitation of the transformation of values from directed English acquisition in classroom environment to self-organised acquisition in the Internet supported learning environment is created, checked and can be used for facilitation of developing of self-experience of acquisition of other foreign languages as well.

Division into groups of participants of English acquisition programmes of adult non-formal education is a sensitive moment for facilitation of transformation of values. The methodology includes learners' self-evaluation by the questionnaire, SWOT analysis of sensitive factors of skills and participation individually, in pairs and in a group and the facilitation of sensitive factors by the facilitator.

Determined sensitive methodological limit factors for transformation of values are the factor of language skills and the factor of participation because they are the most and less understood by learners. The factor of participation is a new formation for transition to self-organised English acquisition in virtual learning environment.

It is recommended to support language learning by working out an individual model of acquisition of language skills and acquisition of learning strategies, for example, making mind maps for acquisition of English grammar.

Bibliography

1. Bertalanffy L. (1968). *General System Theory: foundations, development, applications.* Worchester, Clark University Press. [online] [7.04.2015]. Available at http://monoskop.org/images/7/77/Von_Bertalanffy_Ludwig_General_System_Theory_1968.pdf
2. Bojāre I. (2014). Autonoma angļu valodas apguve jaukta veida e-studijās pieaugušajiem ilgtspējīgai attīstībai. (Autonomous English acquisition in blended e-studies for adults for sustainable development). Starptautaitiskās zinātniskās konferences raksti *Sabiedrība, integrācija, izglītība,* 2.daļa, (Proceedings of the International Scientific Conference *Society, integration, education*), Vol. 2. Rēzekne, Rēzeknes Augstskola, pp. 291-299. ISSN 1691-5887 (In Latvian)
3. Bojāre I. (2012). Electronic European Language portfolio – Adult Learner's Mean of Technologically Assisted Self-Directed English Acquisition: Transformation of Learner's Identity. Proceedings of ePIC 2012, the 10th International *ePortfolio and Identity Conference,* London, ADPIOS, Poitiers, France, pp. 89-93. ISBN 9782954014418
4. Bojāre I. (2013). Empirical checking of criteria of the self-directed English acquisition readiness scale in blended e-studies for adults: qualitative research. Reorientation of teacher education towards sustainability through theory and practice. Proceedings of the 10th International JTEFS/BBCC conference *Sustainable development. Culture. Education.* (Ed. U.Harkonen). Reports and Studies in Education, Humanities and Theology, Joensuu: University of Eastern Finland, Vol. 7, pp. 233-243. ISBN 978-952-61-1111-7
5. Bojāre I. (2011 a). Pašvadīta mācīšanās pieaugušo izglītībā: jēdzienu analīze. (Self-directed learning in adult education: concept analysis. *VII jauno zinātnieku konference,* Rīga,: RPIVA, pp. 10.-18. (In Latvian)
6. Bojāre I. (2011b). Self-Directed English Acquisition in Blended e-Studies for Adults: Criteria of a Scale. *Journal of Young Scientists*, Šiauliai, Šiauliai University, Vol. 2(35), CD, pp. 4-10. ISSN 1648-8776
7. Bojāre I., Ignatjeva S. (2014). Autonomous English acquisition in blended e-studies for adults for sustainable development: Quantitative research Proceedings of the 7th International Scientific Conference *Rural Environment. Education. Personality* (REEP), Jelgava, The Latvia University of Agriculture, pp. 42-49. [online] [06.01.2015]. Available at http://llufb.llu.lv/conference/REEP/2014/Latvia-Univ-Agricult-REEP-2014proceedings.pdf
8. Broks A. (2000). *Izglītības sistemoloģija.* (Education Systemology). Rīga, RaKa.(In Latvian)
9. Dalbiņa D., Grīnberga I., Jundze I. u.c. (2006). *Europesn Language Portfolio for Adults.* Council of Europe, Riga, Public Service Language Centre, p.60. ISBN 9984-9836-4-1
10. Laszlo E. (2004). *Science and the Akashic Field: An Integral Theory of Everything.* Rochester, Vermont, Inner traditions. [online] [06.01.2015]. Available at

http://www.dankunlimited.com/uno_pound_sharing/Know_files/-Science-and-the-Akashic-Field-Ervin-Laszlo.pdf

11. Liepa D. (2011). Integration of Foreign Language Acquisition Components in the Study Process. Summary of the Doctoral Thesis, Rīga, LU, pp. 33-69. [online] [06.01.2015]. Available at http://www.lu.lv/fileadmin/user_upload/lu_portal/zinas/Kopsavilkums_Liepa.pdf
12. Martin R.A. (2003). Summary of Holistic Education: An Analysis of Its Ideas and Nature. *Holistic Education: An Analysis of Its Ideas and* Nature (The Foundations of Holistic Education Series, V. 8) (Eds. S.Forbes.) ISBN-13: 978-1885580153 ISBN-10: 1885580150. [online] [06.01.2015]. Available at http://www.amazon.com/review/R2LZQSONY3PTAN
13. Marulevska K.T**.** (2011)**.** The Interdisciplinary Dialogue as a path to evolutionary growth of the pedagogical knowledge. *Scientific Research*, Vol 9,. Blagoevgrad, Bulgaria, South-West University „Neofit Rilsky", pp. 1-14. ISSN 1312-3575 [online] [06.01.2015]. Available at http://press.swu.bg/media/37596/statiya%20za%20swu_krassimira%20marulevska.pdf
14. Mezirow J. (2000). Learning to think like an adult: Core concepts of transformation theory. In J.Mezirow & Associates, Eds., *Learning as transformation*, San Francisco, Jossey-Bass, pp. 3-34.
15. Parkin-Obe S., Johnston A., Buckland H., Brookes F., White E. (2004). *Learning and Skills for Sustainable Development. Guidance for Higher Educatio Institutions.* Higher Education Partnership for Sustainability (HEPS). London, HEPS.
16. Больнов О.Ф. (1999). *Философия экзистенциализма.* (Philosophy of existentialist). (Перев. С.Э.Никулина). СПб, Издательство Лань. ISBN 5-8114- 0120-5 [online] [6.01.2015]. Available at http://www.philosof.onu.edu.ua/elb/articles/bogataya/bogataya_2.pdf
17. Буданов В.Г. (2007). *Методология синергетики в постнеклассической науке и в образовании.* (Methodology for synergy in post non-classical science and education). Москва, Издательство ЛКИ, 242 с. 978-5-382-00589-8 [online] [06.01.2015]. Available http://www.projedu2012.org/budanov.pdf
18. Давыдов А. (2008). *Системная социология.* Москва, ЛКИ, 192 с. [online] [06.01.2015]. Available at http://www.twirpx.com/file/585115/
19. Роджерс К. (2004). *Взгляд на психотерапию. Становление человека.* Перевод М.М.Исениной под ред. д.п.н. Е.И.Исениной. Терминологическая правка В.Данченко Киев: PSYLIB. [online] [06.01.2015]. Available at http://psylib.ukrweb.net/books/roger01/index.htm
20. Степин В.С. (2003). Саморазвивающиеся системы и постнеклассическая рациональность. (Self-developing systems and postnonclassical rationality). *Цифровая библиотека по философии.* [online] [06.01.2015]. Available at http://filosof.historic.ru/books/item/f00/s00/z0000249/index.shtml

Applying Task-based Language Learning Method for Teaching Vocabulary

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Abstract: The study analyzes a 40 minutes long micro teaching in English as foreign language focused on vocabulary related to cooking, which was delivered applying Task-based Language Learning method. The method views a task as a basic unit of language teaching and emphasizes the significance of real-life communication, thus enhancing communicative language competence. The aim of the study is to show how the task-based method works in practice, making the learners not only memorize new terms, but also use them in communicative situations. The secondary research method involves analyzing the theoretical material, while the primary research method is the case study, employing such data collection tools as classroom observation and questionnaires. The results show that teaching vocabulary applying Task-based Language Learning method is effective, as by the end of the class the learners memorized the provided terms, and were able to use them. Moreover, their reading and writing skills developed as well. It is concluded that the right choice of a theme and activities in Task-based Language Learning makes the learning process more fascinating and more connected to 'real-life'. Therefore, it can be effectively applied when teaching ESP.

Key words: Task-based Language Learning method, task, vocabulary, communicative competence, higher education.

Introduction

The importance of developing communicative language competence cannot be underestimated. Thus, being derived from the communicative language teaching approach, Task-based Language Learning method (TBLL) focuses on the concept of communicative task, simultaneously enhancing the learner's vocabulary and grammar skills. To distinguish the notion of the 'task' from 'exercise', one should turn to R. Ellis, who argues that a number of scholars have agreed that a task is an activity, where the meaning is primary, in other words, 'an activity that calls for primarily meaning-focus language use. In contrast, 'exercises' are activities that call for primarily form-focused language use' (Ellis, 2003, 3). In TBLL, the task includes three basic components, such as pre-task, task-cycle, and post-task. Following theoretical description of the method, the aim of the pre-task phase is to think of the vocabulary associated with the topic; the task-cycle involves the students' group discussions of the task and presenting the report – accordingly, real-life communication is practiced; the post-task includes working with authentic material, focusing on the vocabulary, linguistic patterns, etc. (Richards and Rodgers, 2001, 238-239). It is obvious that TBLL is directly linked to the developing of communicative language competence; moreover, it has a clear and logical structure, which can be easily applied in language teaching class. Therefore, the importance and necessity of researching the method and providing the information to the tutors is evident.

From the historical perspective, TBLL is a relatively new method. Although some elements of the method were used starting from 1950s, no research on it was carried out until mid 1980s (Richards, Rodgers, 2001, 223-226). However, later some research works on TBLL were performed, and the results showed that it is a powerful tool for foreign language acquisition. The results are described as follows: 'engaging learners in task work provides a better context for the activation of learning processes rather than form-focused activities, and hence ultimately provides better opportunities for language learning to take place' (Richards, Rodgers, 2001, 223). The importance of Task-based Language Learning for learners' communication skill progress is stressed, as the tasks reflect the way learners use the target language for 'message conveyance' (Ellis, 2003, 3). Despite the positive results, some other researchers have reported the challenges of the method. It is stated by F. Hatip that 'there is naturally more concern for use of lexis and lexical chunks than for grammar and grammatical accuracy'; some learners use mother tongue in discussions or are likely to communicate by means of gestures, miming and odd words; learners risk to achieve fluency but to forget about accuracy; it is

difficult to evaluate performance. Task-based Language Learning requires the change of a traditional teacher's role of a 'presenter' of new material; he/she does not do much during the task phase. The teacher is rather an observer and becomes a language informant only during the 'language focus' stage (Hatip, 2005). To summarize the previous research results, it can be stated that the opinions about TBLL are controversial; this fact aroused the author's interest in the topic.

The empirical part of the present research involved analyzing a 40 minutes long micro-teaching, delivered using TBLL. The aim of the class was to teach the vocabulary linked with the theme "cooking", as well as to improve the students' reading and writing skills. The micro-teaching involved all three components of TBLL. The objective was to observe the use of TBLL for enhancing the students' vocabulary, evaluating advantages and disadvantages of the method both from the teacher's and the students' points of view. The research population included a group of six upper-intermediate adult non-native learners. The method applied was the case study, with such data collection tools as classroom observation and evaluation questionnaire.

Having described the importance and background of the method, as well as having provided the general information on the current study, the author of the paper continues with discussing the methodology, results and conclusion of the research in a more detailed way.

Methodology

The present part of the paper contains more specified information on the research method and data collection tools, as well as describes the stages of the study. Due to the small number of participants and a short time period available, the selected research method was the case study. 'Case study method enables a researcher to closely examine the data within a specific context. In most cases, a case study method selects a small geographical area or a very limited number of individuals as the subjects of study' (Tellis, 1997); moreover, 'case studies can establish cause and effect ("how" and "why")' (Cohen, Manion, 2013, 289). The data collection tools were administration of questionnaires and observation. The observation was performed by the researcher herself, thus, the role of the teacher was 'participant-observer'. The questionnaires were administered among the students after the class and contained 3 close-ended questions on the evaluation of the class, namely, its organization, attractiveness and usefulness of the tasks, the learners' progress. There was one more open-ended question, requiring the learners to write their comments on what the particularly enjoyed during the TBLL class and what might be improved. Speaking about research population, there were 6 participants, females, upper-intermediate. The topic "Cooking" was selected because of personal interest of the learners in the field; however, it should be added that none of the learners had any experience with English cooking-linked vocabulary.

Next, the stages of the micro teaching were presented. Following the traditional framework of TBLL, it included three parts: pre-task, task-phase and post-task.

The first stage of the lesson consisted of pre-task activities. This phase was divided into two parts. During the first one, the learners brainstormed the topic and answered the teacher's questions linked to the theme. Some replies that were considered to be useful for the task phase were put down on the blackboard by the teacher. The second one was a matching task, in course of which the learners had to link the definition to the term linked with cooking. Some terms were new for the learners; however, the teacher had included them as she had considered them to be necessary for the following stage of the lesson.

The second part of the lesson was the ask phase. The teacher divided learners into several groups, and each group had to perform a task – to create their own recipe of pizza. First of all, the learners brainstormed and discussed their ideas. Secondly, they had to write a small report on their recipe. The last stage was an oral report, when one spokesperson from the group had to introduce their recipe (students were given some time to choose a spokesperson and to prepare oral report); after each recipe other learners were encouraged to express their suggestions, opinions, remarks, etc. While the learners were performing the task, the teacher was monitoring and helping them. Dictionaries were available as well. After all reports had been discussed, the teacher provided the learners with an authentic text containing a homemade pizza recipe. The learners were asked to read it, to examine the difference

between the text and their own recipes (vocabulary, grammar constructions, style, etc.), and to highlight vocabulary that was considered to be useful for cooking

The final part was a post-task phase. The teacher decided not to use a lot of exercises, as it is traditionally suggested in Task-based Language Learning, due to time restrictions. On the contrary, the learners discussed what they had done, their success and expressed their opinions about the activity. However, still, one small exercise was included. It concentrated on activity verbs linked with cooking. The learners had to associate the verbs with corresponding nouns.

Results and Discussions

Having discussed the organization of the class, next, the results obtained via data collection tools are provided. First, the results of the observation are described, and then the figures showing the data received via questionnaire are presented.

To comment on the lesson, the teacher believes that the learners enjoyed it. The group consisted of adults of upper-intermediate level, so the difficulty level was acceptable; however, the learners admitted that some words in the matching task and the recipe were not familiar. However, later, during the task-phase, while discussing their ideas, writing them down (bullet points) and getting ready for the presentation, the students actively used the newly-acquired vocabulary. Therefore, it can be concluded that their communicative competence developed through real-life communication, and the vocabulary was enriched. The students engaged in communication and discussion. The learners also admitted that the exercise in the pre-task phase was useful, as it included vocabulary that was necessary for the performance of the task.

There were several challenges during the lesson. First of all, the teacher noticed that when the learners heard the task, they felt frustrated, because they were not exactly sure about the procedure of making pizza. However, they overcame the 'fear' quite fast and succeeded. Nevertheless, the teacher had an idea that if there were some male-learners in the group (the target group consisted only of female-learners), it would be better to change the theme to a more neutral one. Another challenge was that the learners found it difficult to present a report orally, as they had submitted the written report before the oral presentation, so they forgot some elements of the sequence of activities. The teacher suggests that the learners should be given more time to prepare their oral report. Some students also had slight problems with activity verbs; however, these were solved with the help of the teacher and other learners.

To summarize the observation results, it is possible to state that, despite being challenging for the learners, TBLL is a good tool for enhancing the learners' vocabulary. If one looks back at the aim of the study, one of its points is to evaluate advantages and disadvantages of TBLL from the teacher's point of view. Following the above-mention description, it is possible to sum up pluses and minuses in the Table 1.

Table 1

TBLL advantages and disadvantages as considered by teacher

Number	Advantages	Disadvantages
1.	Using new words – vocabulary enhancing	**Non-linguistic contextual difficulties**
2.	Team work skills development	**Initial frustration**
3.	Acquiring a relatively large amount of vocabulary during one class	**Problems with remembering information**
4.	Development of the communicative competence	**Time restrictions**

Next, the results of the questionnaire for the students are provided and analyzed. As it was mentioned before, the questionnaire contained 3 close-ended and one open-ended question. All close-ended questions followed the same organizational pattern, in which the students had to evaluate their

progress, etc. via choosing points from 1 to 5, with 1 being the lowest. In the open-ended question, the learners were asked to provide their positive comments ('What was particularly interesting and useful for you during the class?') as well their opinions on what might be improved ('What do you think should be changed and how?').

Figures 1, 2 and 3 show both the results obtained from the students and the exact questions that were asked, which are provided as the titles.

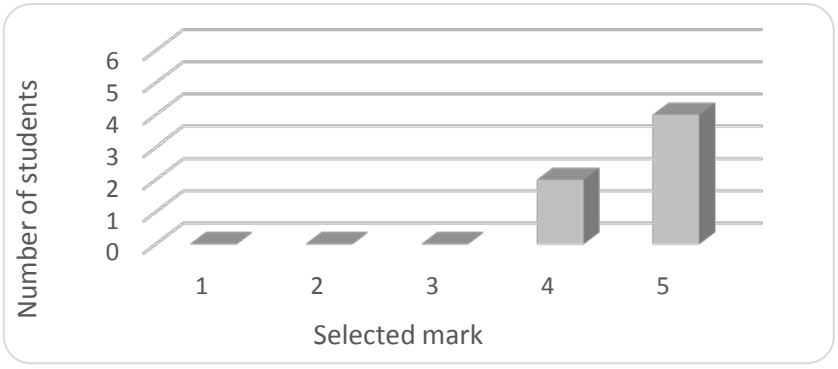

Figure 1. Respondents answer to the question:
"Did you find interesting and useful the organization of the class (3 stages)?"

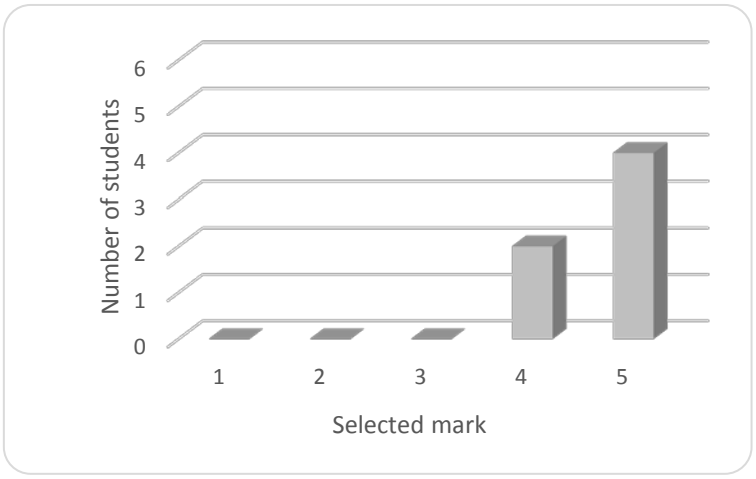

Figure 2. Respondents answer to the question: "Did you find the provided tasks attractive and useful for your vocabulary skills development?"

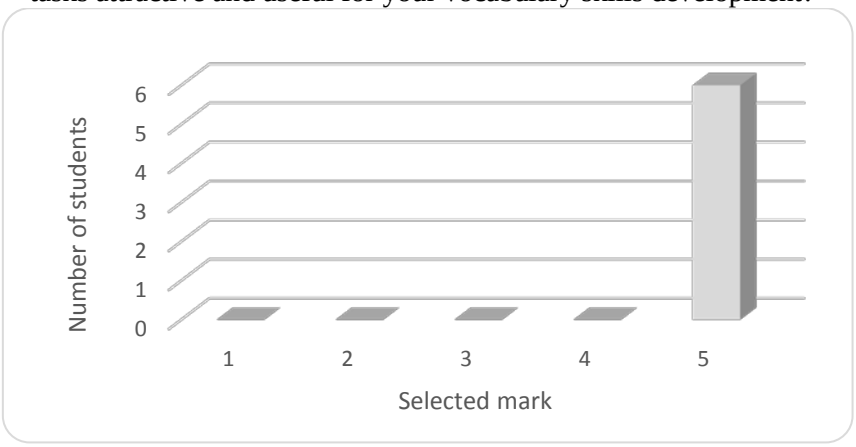

Figure 3. Respondents answer to the question: Do you consider that you vocabulary skills progressed after the class?

It can be concluded that the method was highly evaluated by the students. Possibly, the organization of the class, which is different from the traditional one, as well as the exact choice of the tasks made some students feel slightly frustrated (which also was noticed by the teacher in her observation).

Nevertheless, all 6 students considered that their vocabulary skills improved during the class, which also corresponds to the opinion of the teacher.

The results obtained in the last open-ended question were particularly interesting for the current study, as they focused exactly on the advantages and disadvantages of TBLL from the students' viewpoint. The opinions of the students

Table 2

TBLL advantages and disadvantages as considered by students

Student	Advantages	Disadvantages
Student 1	Good for remembering and using new words in speaking and writing	**Difficult to get used to a different organisation of the class**
Student 2	Improves vocabulary a lot, interesting style	**Short time**
Student 3	Using vocabulary in speaking and writing, particularly enjoyed group discussions	**Some tasks were difficult, e.g. to invent a pizza recipe (due to non-linguistic problems)**
Student 4	Interesting and unusual tasks, easy to remember vocabulary, performing many activities (reading, writing, discussing)	**No disadvantages**
Student 5	Intensive vocabulary improvement, communication skills development	**Short time, too big number of new words**
Student 6	Interesting and productive organization of the class for learning new words and communicating	**No disadvantages**

It is possible to conclude that generally the class delivered using TBLL was accepted by the students. The disadvantaged listed in the table are minor, and some of them, i.e. the time limit, are characteristic features of the organization of the particular class, not of the method as such, and thus can be easily eliminated in the future. Moreover, 2 students out of 6 did not mention any disadvantages at all. However, all students stated that their vocabulary skills have improved, and 5 out of 6 students noted the development of communication skills. It can be also added that the opinions of the students about advantages and disadvantages of the class mostly corresponded to the results of the teacher's observation, provided in the Table 1.

Having discussed the results obtained via data collection tools, one can turn to drawing the final conclusions.

Conclusions

On the basis of the data collected, the following conclusions are made:

- TBLL is a useful tool for improving vocabulary skills of the students. Due to a variety of different types of tasks (speaking, writing, non-productive vocabulary tasks), working with new vocabulary becomes unavoidable and constant, thus improving and facilitating the learners' abilities to remember new words.
- TBLL develops the learners' communicative competence, both in speaking and writing. Also, it provides a possibility to communicate in real-life situations, i.e. discussing the report and presenting it, which provides learners with the skills, necessary also outside language class.
- The disadvantages of TBLL noticed during the current case study are minor and mostly refer not to the method as such, but to the organization of the class. It can be concluded that the method should be used more widely, thus the learners and the teacher will avoid frustration and difficulties when encountering with it. Moreover, all mentioned minuses can be easily avoided and corrected.

Finally, speaking about the possible further investigation, in would be interesting to test the method in the group of intermediate and pre-intermediate learners – possibly, it would reveal some problems or changes that have to be made. Otherwise, the author of the paper believes that TBLL can be successfully applied when teaching both general and ESP vocabulary in different fields, making the learning process active, facilitating and exciting for the students.

Bibliography:

1. Cohen L., Manion L., Morrison K. (2013) Research Methods in Education, 7th Edition. Routledge, New York, USA, p. 289.
2. Ellis R. (2003). Task-based Language Learning and Teaching. Oxford University Press, Oxford, England, p. 3.
3. Hatip F. (2005). Task-Based Language Learning. [online] [17.12.2013]. Available at http://www.yde.yildiz.edu.tr/uddo/belgeler/inca-FundaHatip-TBL.htm
4. Richards J. C., Rodgers T. S. (2001). Approaches and Methods in Language Teaching. Cambridge University Press, Cambridge, England, pp. 223-239.
5. Tellis W. (1997). Introduction to Case Study. The Qualitative Report, 3 (2) [online] [17.12.2014]. Available at http://www.nova.edu/ssss/QR/QR3-2/tellis1.html

Corpus-based Comparative Analysis of English and Latvian Terms of Land Administration

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Abstract: The article presents the analysis of the terms of land administration contained in the texts published in Latvia and the United Kingdom. The aim is to compare the terms used in Latvian texts, their translations in the English language with the terms used in authentic English texts, to identify the most controversial cases and to provide the explanation of the problem arising in working with the English terminology of land administration. The comparative analysis of the terms was based on corpus linguistics methodology, i.e., the parallel English term lists were created, the frequency of the term use was found and the concordances of the extracted English terms from both types of texts were analysed. The findings of the small-scale study reveal a discrepancy in the use of terms of land administration in the translated texts from Latvian into English and the ones found in the original English texts since they contain different terms denoting the same concept.

Keywords: English for specific purposes (ESP), terms of land administration, corpus linguistics.

Introduction

English for specific purposes (ESP) researchers (Dudley-Evans, St. John, 1998; Hutchinson, Waters, 1987) define ESP teaching/learning as a study course that is designed to meet specific needs of adult learners and is related in content, methodology and activities to a specific subject field or occupation focusing on those language aspects of syntax, vocabulary, text structure, semantics, and so on, that are appropriate to such content.

The teaching of a language for specific purposes for non-philologist students at the tertiary level should be aimed at developing competences necessary for the world of work. The Latvian researcher (Luka, 2009) considers that the competence of foreign language for specific purposes consists of communicative, intercultural and professional activity competences, the components of which interact in a definite socio-cultural context. Study courses of English for specific purposes or ESP (if a foreign language is English) should be designed according to the needs analysis and mostly they are content-based. Students at the university improve their language skills, acquired during the secondary school, and gain new skills and the knowledge necessary for their future career and the academic environment. The focus is on the development of knowledge and skills necessary for the reception of scientific and professional texts, and the production skills, speaking and writing, are also concerned with scientific and professional activities hence the ability of the relevant use of field-specific terms (Ozola, Grasmane, 2012).

Concerning ESP teaching in higher educational institutions in Latvia, ESP courses have to be designed not only on the basis of the students' needs analysis, but also on the basis of the EU labour market demands, and the requirements for specific professions and occupations determined in the regulations of the National Occupational Standards adopted by the Cabinet of Ministers of the Republic of Latvia (Profesiju standarti, 2010). They state that most of the professions and occupations require general knowledge of one or two foreign languages and also the terminology of the subject field in one or two foreign languages.

The curriculum of the Latvia University of Agriculture includes content-based ESP courses in the first and second years of undergraduate studies which are integrated in the whole study process, stressing the interdisciplinary approach when preparing specialists for agriculture, forestry, veterinary medicine, environmental studies, land administration, landscape architecture, agricultural engineering and other fields. The ESP study courses include acquisition of terms in the subject field, their use in the authentic texts. Linguists (Bušs, Joma, 2007, Rogers, 1999) define *term* as a word or a collocation

denoting or designating a specific concept of a particular subject field, which in turn belongs to a system of concepts which maps out the structure of the subject field. There is a view that the meaning of terms is context-independent, however, many researchers (see Rogers, 1999) discuss context-dependency, especially, in relation to translation issues.

The ESP course in the study programme "Land Administration" contains 6 CP, and the knowledge of terminology in the specialty is included in the learning outcomes. However, there is no unanimous opinion among industry professionals regarding certain terms and their equivalents in the English language in this subject field. Several terms in English are used in different texts to denote the same meaning, for example, the term "*zemes ierīcība*" appears as "*land management, land use planning, organization of the use of land or land survey*" in various English texts. In addition, there is no Latvian - English dictionary of the terms of land administration available in Latvia. The aim of the paper is to carry out a small-scale study to compare the terms of land administration used in Latvian texts and their translations in the English language with the terms used in authentic English texts. The research question is the following: does the use of terms of land administration in the translation of Latvian texts into English correspond to the terms used in the authentic English texts?

Methodology and text corpora

The following corpus linguistics methodology (Baker et al. 2006, 42-43, 76; McEnery, Hardie, 2012, 49-50) was applied in the present study: (1) the creation of small specialised raw text corpora; (2) the research of the selected term frequency in the corpora; (2) the extraction of the concordance lines containing term use examples from both corpora texts. All selected texts were available online and dealt with rules and regulations of land administration of the Republic of Latvia translated from Latvian into English and similar texts of rules and regulations of land administration of the United Kingdom originally written in English. The analysed texts were arranged in two corpora. The first corpus contained three documents (Table 1) that were translated from Latvian into the English language and they comprised 26,444 words and the corpus was labelled CTTLE (corpus of texts translated from Latvian in English).

Table 1

Text Corpora

Corpus of texts translated from Latvian in English (CTTLE)		**Corpus of the authentic English texts (CAET)**	
Texts	Words	Texts	Words
Land Use Planning Law (Land Use …, 2006)	2,690	Town and Country Planning Act 1990 Chapter 8 (Town and Country…, 1990)	4,731
National Real Estate Cadastre Law (National Real…, 2005)	11, 942	Law of Property Act 1925 (Law of Property…, 1925)	16,185
Land Register Law (Land Register…, 1937)	11,812	Land Registration Act 2002 Chapter 9 (Land Registration…, 2002)	31,443
Total	26,444	Total	52,359

The second corpus contained the UK documents all originally written in English (in total 52,359 words) that were thematically related to the translated English texts (see Table 1). This corpus was labelled CAET (corpus of the authentic English texts). The English text collection was created to serve for the comparison of terminology use in the translated English texts with their use in the texts of the dsame domain originally written in English.

In total 10 terms (consisting of one or two words) were selected in the Latvian language for the research of their English equivalents as used in the texts of both corpora (see Tables 2 and 3 for the

selected terms). The chosen terms were taken from the list of specialized vocabulary included in the programme of ESP study course for Land Administration students to be studied during one term.

Results and discussion

In order to find out how far the use of the selected terms in the English translations of the Latvian documents correspond with their use in the English authentic documents, the terms were searched in both corpora. The search of the selected terms was done with the help of *AndConc* concordancer (Anthony, 2013). The terms were entered in the quarry box and the concordance lines alongside with the frequency of the quarried term were displayed, as shown in Figure 1. Each concordance line was carefully inspected to check if the displayed word really performed the function as listed in Tables 1, 2 and 3. For example, the concordance lines revealed that the term *enter* '*ierakstīt*' was used also in the meaning 'to enter into such agreement' or *decision shall enter into effect* (Cambridge Dictionaries Online were used for defining meanings). The concordance lines displaying the use of the selected words in a meaning beyond the scope of the present study were deleted from the list.

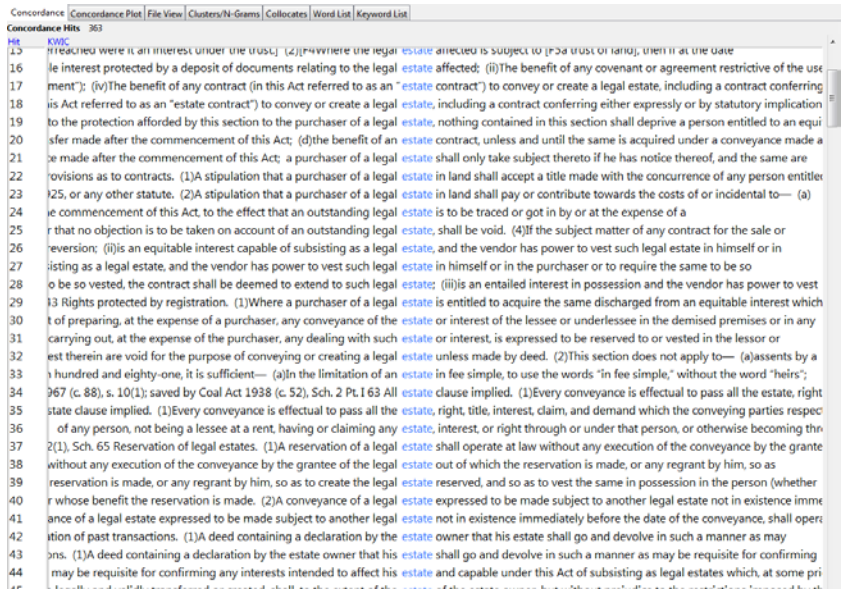

Figure 1. *AntConc* concordance lines of the term *estate* (Anthony, 2013).

In total 5 terms were found in the texts of both corpora used in the function defined in Table 2. In order to provide an overall insight in the frequency of these terms in the selected texts that vary in their length, the raw frequency counts were normalised to a text length of 1,000 words and their frequency is shown in Table 2. Irrespective of their frequency, which varies depending on the purpose of these documents, it is obvious that these five terms are found in all the translated and the authentic English texts included in the corpora.

Table 2

Terms that occur in both corpora (per 1,000 words)

Terms in Latvian	**Terms in English**	**Term frequency in CTTLE**	**Term frequency in CAET**
būve	building	0.15	0.26
hipotēka/s	mortgage/s	0.30	0.72
ierakstīt, ieraksts	enter, entry	0.07	1.85
iznomāt/noma	lease	0.03	1.26
robeža/s	boundary/ies	0.22	0.22

Thus Example 1 shows that the term *lease 'iznomāt / noma'* is used in the meaning of money required for the use of a building. Example 2 reveals that the term *boundary* in both corpora texts denotes the

line that marks the limit or edge of something *'robeža'*. The term *building 'būve'*, as seen in Example 3, denotes a structure with walls and a roof in both text corpora.

(1) This paragraph does not apply to a **lease** (English text corpus)
... the prices of the real estate market and **lease** payments (Translated text corpus)

(2) A general **boundary** does not determine the exact line ... (English text corpus)
... the land **boundary** plans (translated text corpus)

(3) ... any **building** occupies together with land (English text corpus)
... a newly erected **building** (Translated text corpus)

The research of the rest of the selected terms, however, shows that they occur either in the texts that are translated from Latvian into the English language or in the texts that are originally written in English, but not in both corpora. Thus the term *estate* in the meaning of '*nekustamais īpašums*' is the most frequent (see Table 3) of the researched terms in the corpus of authentic English texts, as it is seen in Example 4. None of the concordance lines containing *estate* collocates with the word *real*. Moreover, the word *immovable* is not found in the corpus of authentic English texts, whereas the term *property* is used in the title *Law of Property* or in the meaning defined as 'an object or objects that belong to someone', as in Example 4, without specifying that it means areas or land in someone's possession.

Table 3

Terms that occur in one of the corpora (per 1,000 words)

Terms in Latvian	**Terms in English**	**Term frequency in CTTLE**	**Terms frequency in CAET**
servitūts	easement	0	0.22
	servitude	0.11	0
nekustamais īpašums	estate/s	0	7.50
	real estate	9.64	0
	immovable property	4.91	0
apgrūtinājums	burden	0	0.13
	encumbrance/s	0.56	0
zemes ierīcības projekts	development plan	0	0.07
	land use planning project	2.00	0
kadastrs	cadastre	11.36	0

(4) An easement, right, or privilege in or over land for an interest equivalent to an **estate** ...(English text corpus)
(5) A person may take an immediate or other interest in land or other **property**, ... (English text corpus)

As to the corpus of translated texts, in all cases the term *estate* is used in the collocation *real estate* (see Example 6); this is the most frequent of the researched terms. In addition, comparatively frequent is also the use of *immovable property* in the same meaning that is seen in Example 7.

(6) name of the **real estate** – a title allocated to a real estate in rural terrain by decision of the self-government, other than the address. (Translated texts corpus)
(7) the area of an **immovable property** and of the land attached thereto (Translated texts corpus);

The term *easement* '*servitūts jeb apgrūtinājums'* is found only in the corpus of the authentic English texts (see Example 8), whereas this term is not detected in the corpus of the translated texts. This corpus displays a few instances of the term *servitude*, as seen in Example 9.

(8) the person entitled to the **easement** or profit...(English text corpus)
(9) he person who has submitted a document regarding establishment or termination of **servitude** – in relation to the registration of an encumbrance of the real estate in the Cadastre Information System (Translated texts corpus);

Another term displaying the use variation across corpora is '*apgrūtinājums*'. Some instances of the term *encumbrance/s* are found in the corpus of the translated texts, see Example 11, but this term is not found in the corpus of the authentic English texts, whereas a few instances of the term *burden* are found (see Example 10).

(10) A notice is an entry in the register in respect of the **burden** of an interest affecting a registered estate or charge. (English text corpus)
(11) A division shall consist of four parts in which information regarding the following shall be entered 1) an immovable property, 2) the owner of an immovable property, 3) the **encumbrance**s of an immovable property and 4) the debts of an immovable property.(Translated text corpus)

Regarding '*zemes ierīcības pojekts'*, the translated text corpus displays the use of *land use planning project* in such contexts as shown in Example 13. However *land use planning project* has not been found in the corpus of the authentic English texts. Instead, contextually the same idea is found in the sentences that employ the term *development* (see Example 14).

(12) A **land use planning project** shall be developed by complying with the spatial plan of the local government. (Translated text corpus)
(13) take into account the **development plan** and any declared or ascertainable pattern for the grant or refusal of planning permissions in the relevant areas, as well as the period at which and context in which the restriction was created or imposed and any other material circumstances. (English text corpus)

The final, the tenth term, *kadastrs* has been detected in the corpus of translated texts in such collocations as, for example, *cadastre documents*, *cadastre object*, *cadastre statement*, *Cadastre Information System*, *cadastre data*. This term, however, has not been detected in the corpus of the authentic English texts. This is explained by the fact that the word *cadastre* is not commonly used in the UK due to the fact that because of historical reasons the development of land administration institutions has taken place in a different way from the rest of Europe. "A *cadastre*" is up-to-date information system consisting of register of land assigned for use, cartographic materials of land cadastre, data of land recording and land valuation. According to the legislation of Latvia, buildings and structures that are not owned by the same owner as the respective land and apartment properties are also required to be included in the cadastre (Parsova, Boruks, 2009). The UK does not have a cadastre which is different from other European countries. The UK has a compulsory land registration, but there is no central record of the precise location of boundaries. The rural land register and the real estate tax register could be considered as a type of the cadastre in the UK. The land law in the UK does not have a concept of ownership but rather of rights over land (Grover, 2008). These historical and culture differences should be explained to students when teaching terms of land administration within the respective ESP course.

Conclusions

The findings of the small-scale study show that there is a certain discrepancy in the use of terms of land administration in the translated texts from Latvian into the English language and the ones found in the original English texts. Thus a half of the selected terms occur either in the texts that are translated from Latvian into the English language or in the texts that are originally written in English, but not in both corpora. The conclusion can be made that original English texts contain different terms (e.g., *easement, estate/s, burden, development plan*) from the ones used in the texts translated from the Latvian language into English (e.g., *servitude, real estate/immovable property, encumbrance, land use planning project*) denoting the same concept.

As regards the subject field of land administration, historical and culture reasons could be one of the explanation of such inconsistency of terminology. Another reason is the lack of the English – Latvian dictionary of land administration. A further research would be advisable to investigate in detail the terms that are used in different texts.

Bibliography

1. Anthony I. (2013). Developing AntConc for a new generation of corpus linguists. Corpus Linguistics 2013. Abstract Book (eds. A.Hardie, R. Love). Lancaster, UCREL, p.156.
2. Baker P., Hardie A., McEnery T. (2006). *A Glossary of Corpus Linguistics.* Edinburgh, Edinburgh University Press, p.187.
3. Bušs O., Joma D., Kalnača A., Lokmane I., Markus D., Pītele I., Skujiņa V. (2007). *Valodniecības pamatterminu skaidrojošā vārdnīca.* (Dictionary of Linguistic Terms) LU Latviešu valodas Institūts, p.623. (in Latvian)
4. Cambridge Dictionaries Online [online] [10.01.2015]. Available at http://dictionary.cambridge.org/dictionary/british/
5. Dudley-Evans T., St.John M.J. (1998). Developments in English for Specific Purposes. A Multi-Disciplinary approach. Cambridge University Press, pp. 301.
6. *Land Register Law* (1937). The Cabinet of Ministers of the Republic of Latvia. Valsts Valodas centrs (The State Language Centre) [online] [10.01.2015]. Available at http://www.vvc.gov.lv/advantagecms/LV/tulkojumi/meklet_dokumentus.html;jsessionid=7A9B810417669BE9F13FA2CF0ECC27C1?query=Land+Register+Law+&Submit=Mekl%C4%93t&resultsPerPage=10
7. Land Registration Act 2002, CHAPTER 9 (2002). Legislation.gov.uk uk [online] [10.01.2015]. Available at http://www.legislation.gov.uk/ukpga/2002/9
8. *Land Use Planning Law* (2006). The Law of the Republic of Latvia. Saeima. Valsts Valodas centrs (The State Language Centre) [online] [10.01.2015]. Available at http://www.vvc.gov.lv/advantagecms/LV/meklet/meklet_dokumentus.html?query=land%20use%20planning%20law&resultsPerPage=10
9. Luka I. (2009). Development of Students' English for Special Purposes competence in Tourism Studies at Tertiary Level. English for Specific Purposes World. *Journal for Teachers.* TransEarl, Issue 4 (25), Vol. 8, 2009, pp. 32. [online] [10.01.2015]. Available at http://www.esp-world.info/Articles_25/Ineta_Luka_ESP_World.pdf
10. Grover R. (2008). *Why the United Kingdom does not have a cadastre - and does it matter?* [online] [10.01.2015]. Available at https://www.fig.net/commission7/verona_am_2008/papers/12_sept/7_2_grover.pdf
11. Hutchinson T., Waters A. (1987). *English for Specific Purposes: A learner Centred Approach.* Cambridge University Press, p.181.
12. *Law of Property Act 1925* (1925). Legislation.gov.uk [online] [10.01.2015]. Available at http://www.legislation.gov.uk/ukpga/Geo5/15-16/20/contents
13. McEnery T., Hardie A. (2012). *Corpus Linguistics: Method, Theory and Practice.* Cambridge, Cambridge University Press, p.294.
14. Ozola I., Grasmane D. (2012) Changing Priorities and Emphasis of Foreign Language Acquisition Skills for University Students in the European Union Context. *Proceedings of 5th International Conference of Education, Research and Innovation,* ISBN: 978-84-616-0763-1, Madrid, Spain, pp. 1477 - 1485.
15. Profesiju standarti. (2010). (Occupational Standards) LR Labklājības Ministrija, p. 795. [online] [10.01.2015] Available at http://www.lm.gov.lv/upload/darba_devejiem/profesiju_standarti.pdf (In Latvian)
16. *National Real Estate Cadastre Law* (2005). The Law of the Republic of Latvia. Valsts Valodas centrs (The State Language Centre) [online] [10.01.2015]. Available at http://www.vvc.gov.lv/advantagecms/LV/meklet/meklet_dokumentus.html?query=+National+Real+Estate+Cadastre+Law&Submit=Mekl%C4%93t&resultsPerPage=10 http://www.vvc.gov.lv/export/sites/default/docs/LRTA/Likumi/Immovable_Property_State_Cadastre_Law.doc
17. Parsova V., Boruks A. (2009) Computerised Data Recording in the State Cadastre of Latvia: Theoretical and Practical Aspects. *Transactions of the Estonian University of Life Sciences, 225, Land Surveying and Land Management,* Tartu, Estonia, pp. 29 - 36.
18. Rogers M. (1999). *Word, Text, Translation*: *Liber Amicorum for Peter Newmark.* (Eds) Anderman G., Rogers, M. Multilingual Matters. p. 240.
19. *Town and Country Planning Act 1990 CHAPTER 8* (1990). Legislation.gov.uk [online] [10.01.2015]. Available at: http://www.legislation.gov.uk/ukpga/1990/8