Rural Environment. Education. Personality. (REEP)

Proceedings of the 9th International Scientific Conference

Latvia University of Agriculture
2016
Jelgava

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Content

LIFE QUALITY IN THE CONTEXT OF HOME ENVIRONMENT, HOME ECONOMICS, HOUSEHOLD, CONSUMER SCIENCE, VISUAL ART

DEVELOPMENT OF PROFESSIONAL EDUCATION AND CAREER

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-2016).** Authors of the articles are from 8 countries - Czech Republic, Estonia, Germany, Kazakhstan, Latvia, Lithuania, Poland, Slovenia. Totally 31 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, consumer science, 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 development of specialists' competitiveness. Developed the conception of study environment facilitating the competitiveness of hospitality company managers, where, within the context of the organization of studies, there has been actualized the constructivism approach and the principles resulting from it: the principle of experience-based learning and the principle of active learning. Supporting the development of an individual, including the development of his/her competitiveness, such environment shall become an open and inclusive one, performing many and different functions. The ecological approach offers a wide range of opportunities regarding performing of interdisciplinary research in the educational sciences, as well as comprises significant potential of innovative, creative pedagogical activities in practice. One of the ways of the implementation of ecological approach is the workplace-based learning. The workplace-based learning is both scientific conception and strategy for the elaboration and development of professional education dual system in the state-level educational policy and educational management fields.

Nature protection areas play an important role in ensuring people's direct contact with nature, especially in developed countries, where pristine natural environments are rare, scattered, and disappearing. Empirical and theoretical evidence support the role of nature in cognitive, affective, and value-related development among children and adolescents. The effectiveness of educational activities for primary school students in Kozjansko Regional Park (Kozjanski regijski park) in southeast Slovenia are examined. The researchers investigate students' knowledge and attitudes towards the park's natural and cultural heritage.

The social environment of the class is the interpersonal relations among concrete individuals with the aim to find out and understand the other person's desires, needs and opinions. Main indicators characterizing the social environment are mutual relations, attitudes, interaction, communication, roles and the desired qualities in the class environment are the mutual trust, cooperation, respect, the sense of belonging, the sense of safety and self-discipline.

Education for getting competence focuses on competence based innovative processes taking place in modern society and developing a new system of educational values. In twenty first century, fully manifested the deep dependence of modern civilization on the skills and personality traits which are in

the formation of the education. New paradigms resulted in a review of approaches to the development of education strategies.

Implementation of education policy largely depends on the quality of teacher's work in which teaching takes a significant place. It is especially important in the present modern school because education actually is the driving force that moves the advance of the society and the growth of national economy. Modern school is characterized by high quality of teacher's teaching and pupils' learning. Effective teaching is the foundation for successful, cooperation–oriented and personalized learning process, which in its turn, ensure better trained specialists, more affluent and safer society and the formation of jointly responsible citizens. Learning in modern school takes place beyond the classroom. The teacher initiates discussions in social media, is open to innovations and application of communication technologies in the teaching/learning process. Many researchers indicate that the current understanding of teaching has to be changed in essence. The teacher is creative and entrepreneurial and working in the e-teaching/learning environment stimulates the pupils' individuality and talents. Information and communication technology (ICT) competences are necessary part in education and professional qualities of both a teacher and a student.

Students' self-assessment of their learning is an essential and recognized part of the study process that helps to improve their self-directed studies. Researchers focused on the analysis of the components of self-directed studies and particularly to purposefulness of studies and time management, e.g. the students' capability to plan time in favour with study requirements using the approach of transformative learning.

Beside the high demands that are set for teachers, they have been facing numerous challenges - problem-based learning, experiential learning, discussions, active learning, consulting, coaching, project method and educational excursions. All these methods develop learners' personal qualities as creativity, responsibility, problem solving, time planning were expressed strongest. Educators should be coordinators of productive cooperation between students, family and educators themselves. Teacher creates an environment for positive communication that can help the student to foster initiative, to become independent and responsible in their actions. Mutual communication is very important for the establishment of the system of values, decision-making and their evaluation. Techers should develop visual creativity, cooperation skills and social competences using reflection and self-evaluation.

Competencies of Graduates of Vocational Education are being explored. Competencies which were investigated: (1) Communication in the mother tongue, (2) Communication in foreign languages, (3) Mathematical competence, (4) Work with digital technologies, (5) Learning to learn, (6) Social and civic competence, (7) Sense of initiative and entrepreneurship, (8) Cultural competence. The development of transferable competencies has been identified on the basis of content analysis of the professional curriculum.

Articles on life quality in the context of home environment describe the topics on habits of healthy nutrition, human well-being and educational problems in school.

Taking into account the importance of the human resources and potential of young students in the future of the country and the relevance of life quality, the researchers clarified the perceptions of students on the quality of life. The main categories that have an impact on students' quality of life are as follows: students themselves and their own personality traits, interpersonal relationships, family and friends, material support, personal development and education, as well as time. According to students, the contributors to a good quality of life are often different from the restrictive aspects. Besides financial problems, students mention an existential problem, namely, lack of time as one of the problematic categories of life quality. Students' quality of life is promoted by the learning environment, if it is open to change, innovation, and is characterized by a positive attitude.

Europe including Latvia is facing enormous socio-economic and unprecedented demographic challenges in the context of volatility, uncertainty, complexity and ambiguity. In the light of these challenges, higher education in rural areas is struggling to adopt the best approach, pursuing efficiency in the organisation of the study process. Therein, optimization of the study process in higher education within rural areas such as a lecture room of a proper size, staff to be employed, etc. has attracted a lot of attention. In order to optimize the study process in an efficient way a simulation model was created.

A new simulation model based on binary students' behaviour should reflect both criteria such as students' probability as well as concentration in the study process.

Numerous studies of researchers focus on healthy nutrition as one of the key factors for a full-fledged life. The topic of nutrition habits is relevant to the people of all age and social groups. The researchers determine the importance of students' nutritional knowledge and preferences in determining their habits related to fruits and vegetables. Participants' nutritional knowledge, frequency of consumption of the various groups of vegetables and fruits, preferences, and socio-demographic characteristics were assessed. The higher was the level of nutritional knowledge, the more often respondents ate dried fruit, root vegetables, nightshade plants and frozen vegetables. The nutritional knowledge had no effect on how many times fruits and vegetables were consumed during the day. The differences in the consumption of fruits and vegetables were also demonstrated after taking into account the socio-demographic situation and preferences for individual groups of products.

Researchers investigates the expression of verbal creativity of the Baltic pre-service Technology teachers in their final years of study and analyzes the constituent dimension of consumer culture. The development of consumer culture is part of Technological education curriculum analyzing the issues of responsible consumption which are becoming more and more complex. In most cases the result of education is directly dependent on the educator's knowledge, skills, values, habits, experience and sophistication. Creativity breeds creativity, hence, the expression of verbal creativity of pre-service Technology teachers is analyzed as a means to reveal the relation of pre-service teachers with the field of electronics in terms of consumption.

As an educational problem the existing conflict between theory and practice that nowadays still appears in the teaching of Home Economics and Technologies was defined. On the one hand, the school is supposed to promote pupils' creative potential, but in real life the training process is widely expanded by reproductive activity. The researchers explore problematic aspects of the elementary school pupils' expressions of creative activity and to reveal their promotion opportunities in the training of Home Economics and Technologies, working with natural materials. A problem situation and motivation is relevant for the development of creative activity as the expression of needs and interests which experiences the unity of emotional and intellectual awareness.

Development of professional education and career research includes progression of the career planning services. Intensified competition between higher education institutions in terms of increasing enrolment rates and retaining students makes education managers reconsider their strategy aimed at identifying the elements and indicators of competitive advantage. Researchers wanted to initiate a discussion about the role of career guidance and counselling services in the higher education institutions. It is argued that career development opportunities can be considered from different perspectives; modern universities provide various professional development opportunities for improving a wide range of transferable skills including career development skills, the latter being essential to a successful job search both in the local and international labour market.

One of the research paper deals with the results of research on the factors influencing women's successful careers. The research aim is to identify the most important women's skills, personal qualities and the factors that affect women's career change or career choice. The research survey found the most important influencing factors in women's career development, they were the education level, the number of jobs in the place of residence and the psychological climate at the job. The research found that the most essential personal qualities were as follows: purposefulness, enterprise and insistence, ability to organise one's own work and abilities to work in a team and make decisions independently. The research will contribute to the understanding of the factors influencing women's successful careers and their role in cases of women's career change or unemployment. Career counsellors and personnel selection professionals may use the findings in their career counselling.

For strengthening the career development of the unemployed, there were studied the motivation theories that focus on values-based and active engagement in learning, the immediate usability of learning outcomes and assertiveness. According to the survey, the unemployed revealed that the main problem was their knowledge and skills mismatch with current labour market demand, thus showing a desire to improve their skills or get a new one using career education. However, the major obstacles were the disbelief of the unemployed in their own abilities, the lack of jobs and hence the lack of motivation to

learn. The results of the research could be used in further education by learning facilitators in training the unemployed and as a contributing factor for increasing the motivation of the unemployed and extending opportunities for career development and integration into the labour market.

Scientists analysed results from the survey on the career guidance and counselling conducted in the framework of Erasmus+ Strategic partnership project "Information and Communication Technology for Romanian Career Counselling (ICT 4 RoCc)". The problem has been approached by analysing and evaluating career guidance services in project partners' countries and establishing the pupils' needs in the area of career counselling as well as available instrument to satisfy those needs. The questionnaire consisted of four diagnostic blocks: availability of the career counselling services, students' needs for the successful counselling and vocational guidance, information suitable for vocational career guidance and information about the respondents. The analysis of youth unemployment in the Baltic countries is also given in order to underline the need and usefulness of career guidance and counselling. According to the findings in Latvia special attention should be paid to the outcome of the residence: pupils from rural areas more often have access to career counselling services by means of the school counsellor and they more often need counselling from a person specialized in this field; pupils from urban areas more often have plans for personal development or a career plan and they prefer online access to scientific information about vocational guidance. The results show that career guidance and counselling between the Baltic States are more developed in Estonia.

Business students and employers' attitude towards supervision were investigated. The role of supervision and professional business advisory continues to grow in Europe and in Latvia as well. In increasing number of sectors, it is seen that supervision and its methods are used for emotional support and leadership ability promotion. There is a growing need for specialists from this field. All three dimensions of attitude towards supervision are compared in the study: emotional, cognitive and behavioural, the links between each of them. The study concluded that, overall, students and employers' attitude towards supervision is positive, but they lack knowledge about it and are not consistent whether they would be willing to attend supervision sessions. The research and its findings give a better understanding of supervision and supervisor profession and minor public's attitude towards it. This is especially important because the growing number of academic education programs in Latvia creates a need to inform potential recipients of supervisor services - entrepreneurs and business managers.

Career guidance has to be grounded on viable theories and concepts, consistent with one's experiences and able to enable people (counsellors as well as clients) to make predictions about career. Development of the viable theories and concepts has to be two-way process, including theoretical studies and investigation of individuals' experience in real life activities. Several career theories and the concepts of career were briefly analysed. The scientists try to find out words and phrases, people made use to define notion of career. The respondents were asked to define notions of career and successful career by completing sentences Career is… and Successful career is… Words, phrases and sentences were categorized into twelve categories: 'work', 'satisfaction', 'self-regulation', 'sequence', 'earnings', 'personal development', 'results', 'external evaluation', 'suitability', 'lifelong process', 'entrepreneurship', and 'interaction'. Categories more often employed to describe notion of career among respondents are that of 'work', 'satisfaction', 'self-regulation', 'sequence' and 'earnings'.

Articles about psychology cover discussion on quality of hospital nursing work life and psychological and subjective well-being. The quality of working life for nurses, their psychological and subjective well-being affects not only nurses themselves but also others, because nursing is directly connected with caring for others. Scientists find out the correlations between hospital nursing quality of working life, their subjective and psychological well-being. Most of the medical nurses describe work life quality as satisfactory. Work life quality correlates positively with psychological well-being. The overall feeling of psychological well-being among the personnel is on a medium level. The respondents show higher scores for the ability to adapt to the environment and society, on the mutual relationship and sense of life scale. The respondents show lower scores on the autonomy, personal growth and self-acceptance scales. The respondents find relationship with other people important, and trust and well-being of others are essential for them. The results of this study could be used to optimise personnel's quality of working life as well as its psychological and subjective well-being.

One of the articles present study on examined attachment styles (secure, avoidant and anxious/ambivalent) that differentiated teachers as victims of student and adult bullying and non-victims of bullying in school settings. Results indicated that teachers as single-target victims of students and adults bullying and teaches as multi-target victims of bullying in school settings had higher scores in avoidant and anxious/ambivalent attachment scales than non-victims of bullying. There were no statistically significant differences across scores of secure attachment among four study group members. Findings reflect the role of insecure – avoidant, anxious/ambivalent, attachment in the vulnerability to victimization of teachers by students and adults.

Other researchers investigate attitudes towards violence of criminal offenders with Implicit Association Test (IAT) and self-report procedure. The results showed that there is a significant difference between explicitly measured variables of the groups "Convicts" and "Ex-convicts". There was no significant difference found of implicitly measured attitudes between the groups, but a slight tendency of the fact that previously not convicted individuals had more negative attitude towards violence was revealed. A significant correlation was found between implicit and explicit measurement results for the group "Convicts".

Usage of information and communication technology (ICT) develops very fast, appears different electronic educational tools. The content of the electronic educational atlases and the maps of Kazakhstan, and also interface screenshots of the electronic atlas showing functions of navigation on the maps of the atlas, scaling, preview and the printing of maps, export of maps in the graphic editor, saving of maps in the raster file and opening external and additional shape files are presented in one of the article. In the main part of the article the didactic functions and educational problems are described which a teacher and a pupil can solve using electronic educational atlas in the Kazakh, Russian and English languages. In the concluding part of the article the technology of the creation of electronic atlas is described developed by means of work with spatial data of a library Open Source MapWinGIS ActiveX Map Control and a programming language C# 5.0 in the environment Visual Studio 2013. The created atlas adapted for school education will allow to intensify process of introduction of geo-information technology in the education.

The development of analytical skills for prospective economic specialists is one of the most important competencies in a changing labour market and is one of cornerstones of the mission of higher education. A significant reduction of the mathematical unit in the Bachelor study program "Economics" increases the value of the course of applied mathematics as a means of academic development and in first analytical capacity of students. The study analyzes the impact of the course "Quantitative methods in economics" on the development of students' competence. The study intensity of the students and weak motivation just study calls for a change in the study process. Students' analytical skills develop if the study process is based on the student-centred and self-directed study approach using also the distant forms of studies. Modern applied mathematics assumes the combination in the study process of such traditional and innovative methods, tools, forms of learning as integrated lectures, professionally oriented set of practical exercises with the use of the computer. Complex of applied problems actualizes the realization of interdisciplinary connections at the level of knowledge and analytical work. The solution of tasks intensifies the educational-cognitive activity of students in mastering subject knowledge and skills as professionally significant qualities.

Assessment of students' knowledge by means of online tests is a relatively new method of knowledge assessment and control. It enables wide modernization and optimization opportunities of the tuition process. The results of study testify that using of different teaching methods is related to effective tuition process of mathematics.

The section **Foreign languages for professional and academic purposes** includes the research about active teaching/learning as urgent need in contemporary education for sustainable development. The scientists search for effective ways and methods of teaching on environmental issues. Their own teaching experience has enabled the development of some exemplary forms of action to involve the students to engage in the acquisition of knowledge in classes on sustainable development. The study refers to the degradation of ecosystems, which are the basis of life and human welfare. It emphasizes the need to seek effective methods of education for sustainable development, stresses the difference between that and the environmental education. Considering the reasons for the need to introduce active

methods of education, the authors show examples of their use. They also underline the importance of motivating and inspiring both students and teachers alike. Taking into account the need for international cooperation in creating a sustainable development reality, the authors highlight the value of effective language education by showing its capabilities on the example of ESP (English for Specific Purposes) and CLIL (Content and Language Integrated Learning).

Teaching a foreign language – what can be new in it? Most methods are as old as civilisation itself, some have appeared with the development of information technology. Teachers attend seminars and conferences, where they learn from each other, borrow some ideas which we implement and test in our specific environment. It is well-known that there is not a single perfect method, not a single perfect book which suits our needs and the needs of our students. There is a hot discussion about on-line courses, which are not a substitute for in-person classes. Moodle, which seemed to be a clue in the solution of many students' problems, is nowadays often criticised both by teachers and students. Interviews, discussions, monitoring and case study are used to find out the opinion of students and teachers. Viewing the process of teaching as a provision of guided opportunities for students, teachers should not refuse the traditional view, using a combination of both. Scientists are interested in finding an answer to the question how to find the most suitable methods and material for a particular students' group in foreign language teaching (FLT) for specific purposes, paying special attention to the role of the teacher. Combining old and new, sharing/borrowing the ideas and resources, using old methods in a new context and environment would help a lot.

Teachers, lecturers, professors, 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
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Ecology of Education: Ecological Approach in Education

Experience-Based Learning and Active Learning Environment for Promotion of Prospective Hospitality Business Managers Competitiveness

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Abstract: One of the basic tasks of a modern higher education institution is to facilitate the development of specialists' competitiveness. On the basis of ecological approach, the authors of the article have developed the conception of study environment facilitating the competitiveness of hospitality company managers, where, within the context of the organization of studies, there has been actualized the constructivism approach and the principles resulting from it: the principle of experience-based learning and the principle of active learning. The aim of research presented in the article: to substantiate theoretically both these principles within constructivism approach context. Studies based on experience are necessary in order the student as a prospective specialist could learn from own experience and the experience of others, as well as in order he would gain new experience of studies and professional activities during the study process. The experience-based learning is a self-adjustable, active and constructive process, where cooperation and exchange of views are of particular importance and where, on the basis of previously gained experience, there is constructed and amassed new experience, the new cognitive constructs of psyche are formed. The experience-based learning is fruitful, if they are meaningful and subjectively important. The principle of active learning envisages ensuring of such study environment that would enable the student to self-activate and express himself through different study activities, including problem-based studies. The facilitation of the personality's self-activities and self-development is the main aim and precondition of education, because education, including new knowledge, a human being acquires as a result of his/her diverse activities and efforts. Thus, the self-activity is simultaneously means and result of education. The experience-based learning and active learning are important principles for the facilitation of specialists' competitiveness in the study environment of higher education institution. The results of theoretical research show the complexity of the principles of constructivism approach, the diversity of substantiation and interpretation and the considerable variety of implementation.

Keywords: active learning, competitiveness, constructivism, experience-based learning, self-activity, higher education.

Introduction

Education is a means for the facilitation of the sustainable development of modern society. In its turn, only such education is sustainable that can meet the present society's needs, as well as its needs from future perspective. One of the basic tasks of modern higher professional education is to facilitate the development of specialists' competitiveness. A prospective specialist's competitiveness could be viewed in the contexts of three different levels: 1) the competitiveness and sustainability of all society from the future perspective; 2) the competitiveness and sustainable development of the company, where the specialist is employed; 3) the viability, self-perfection and self-realization of a specialist as a self-developing personality under the changeable environment.

In modern education, the competitiveness of a human being as a personality and also as a specialist is studies within the context of the new paradigm of this concept.

Competitiveness is an integrative totality of a personality's qualities that ensures its viability, including the 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 the determination and an action oriented towards success; the readiness to overcome difficulties and to 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, behavior), the ability to make a decision; the responsibility for the made decisions and their

consequences; 3) different competences, including also creativity as an ability, oneself- and environment - *friendly thinking, attitude* and *behavior*: 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, 2011, 525-526).

The results of theoretical research performed by the authors of the article, as well as observations and reflection of own experience enabled to draw an important conclusion: it is important to ensure such study environment at the higher professional education institution that would facilitate and support the development of the prospective specialist's competitiveness. Such study environment shall be open and inclusive. For this purpose, the authors of the article have developed the conception of study environment facilitating the hospitality specialists' competitiveness.

The aim of the article is to make available to public a part of the results of performed theoretical studies, which became an essential component of the study environment conception developed by the authors of the article. ***The aim of studies*** published in the article is to substantiate theoretically two principles of constructivism approach: experience-based learning and active learning.

Methodology

The authors of the article based the development of the conception of study environment facilitating the hospitality company managers' competitiveness on ***ecological approach***, substantiating this study environment as an interaction system in many environmental contexts and disclosing the multifunctionality of this environment. The substantiation of the organization of study process, based not only on ecological but also on ***constructivism approach***, is very important within this conception.

In scientific literature the concept ***approach*** is explained as: a research aspect, initial position, beginning from where the research starts and which determines its progress in relation to the aim (Коротков, 2000); a guideline, belief (Новиков, Новиков, 2007); ideology and methodology of dealing with the problem, which discloses the main idea, the socio-economic, psychologic and pedagogical context, the main aims, stages, mechanisms for achieving aims (Ибрагимов, 2007); the progress of a scientific though based on a particular paradigm, a totality of world outlooks, theory; thinking, attitude oriented towards and based on certain values; studies, analysis and evaluation of scientific literature (Nolen-Hoeksema, Fredrickson, 2014); the reflection of authors' experience (Кукуев, 2010).

Methods of the research: 1) study, analysis and evaluation of scientific literature; 2) reflection of authors` personal experience.

Results and discussion

Nowadays one of the didactic demands is to ensure such study environment, which would facilitate the students' cognitive activities, creativity, power of reasoning and taking decisions, flexibility in thinking, performance and communication, facilitating the amassing of experience necessary for the solution of problem-oriented tasks and cooperation, including exchange of views, the development of attitude, including accountability, reflection, self-activity in studies, the development and progress of competency, including competencies of professional activity environment competencies, and the development and progress of professional identity. Such study environment on the whole ensures the development of specialists' competitiveness. The answer to the question how to implement this didactic demand successfully is given by ***constructivism approach***.

The theories of constructivism were developed in 1990ies. The historical origin of constructivism could found in the works of J. Bruner, J. Dewey, I. Kant, V. Klafki, J. Piaget, S. Rubinstein, L.S. Vygotsky and other authors (philosophers, psychologists, pedagogues). The developers of these theories are G. Cannella, E. Glasersfeld, L. Kroll, A. MacKinnon, J. Reiff, V. Richardson and other (cited in Briede, 2004). It is possible to identify two trends of the interpretation of theories in constructivism:
- *psychological constructivism*, based on J. Piaget's cognitive development theory;
- *social constructivism* based on L.S. Vygotsky's theories.

In the facilitation of a specialist's development constructivism approach is related to several basic conclusions (Katane, Kalniņa, 2010; Tiļļa, 2005).

- Learning is *a self-adjustable, active and constructive process, where cooperation and communication are of particular importance* and where preliminary experience is related to the new one. Learning depends on the context of environment and study content that encourages students to communicate and cooperate among themselves in order to identify the problem and obtain new learning experience regarding dealing with the problem. The learning experience is the students subjective experienced and reflected knowledge, their skills to perform actions. Every young man develops his own individual experience, which is amassed in the socio-cultural environment, where he develops. As a result of interaction with environment, learning acquires different dimensions and thus enriches the general understanding of learning concept.

- Nowadays the educator's role changes. He becomes not only an organizer of studies, but also an observer, a counsellor who studies himself, through the search of invariative answers to the problems and through a dialogue with students he obtains new information, draws new conclusions and develops his competencies.

- Building his learning upon constructivism approach, a student as a subject more and more takes over responsibility for his learning and organizes it himself.

- It is important to ensure environment appropriate for constructive studies; there shall be offered the diversity of information obtaining, use, evaluation and of problem-solving methods; there shall be ensured a student's free choice and there shall be developed the decision-taking skills.

- Reflection of experience is very important for the facilitation of the development of learning skills. It is possible to observe the increase of the significance of study process and the evaluation of its results and the self-evaluation.

- The constructivists emphasize an idea that there are no correct, universal interpretations, the subjective interpretation is important; therefore the significance of discourse actualizes within the studies. The social group creates the knowledge constructions, where the individual experience becomes important, the subjective opinion has been obtained during the discussions, modifying and adapting it within the social interaction.

Within the study process, constructivism approach stimulates creative thinking, therefore teamwork is a topical form of studies, where, through communication, there is a meaning identified, and this motivate to learn, in social interaction, the developed defective or even wrong views are replaced by more precise knowledge, and it is promoted by Problem-based learning (PBL) (Bereiter, 1994). Thus – people's thinking is contextualized (it is limited, intensified, directed and controlled by context) (Glasersfeld, 1996).

The development of study environment context and psyche cognitive constructions in cooperation is one of the basic ideas of constructivism (Smith, 2001), where an important phenomenon is the knowledge of everyday life and everyday experience. The type of the implementation of understanding is the presentation and exchange of opinions. Thus the hermeneutic phenomenon is the general connection of thinking and speaking. In hermeneutic conversation there is a common language developed. Understanding is substantially related to the concepts of reconstruction and integration (Gadamers, 1999).

There are emphasized the cognitive effects obtained as a result of constructivism approach: the initial analysis of problem and the emphasizing of the most important knowledge within the group discussion; the detailed elaboration of such knowledge and useful processing of new information; restructuring, systematization of knowledge and constructing of semantic fields, constructing of social knowledge, learning within the context; identifying of connected, analogic problems; designing of mind-maps etc. (Bazens, 2008).

The meaningful, research-based and inquiry – based studies take place within such context (Hmelo-Silver, Duncan, 2007). The authors find that the cognitive dissonance or conflict, which has developed in the studies, cause confusion, become an internal motive for learning connecting intellectual and pragmatic aims. The development of knowledge, skills and competencies promote viability, construction of the insight into the world (Glasersfeld, 1996; Resnick, 1987). Thus constructivism

approach is actualized from the aspect of study process management (planning, organising and evaluating) in order to facilitate the competitiveness of students as prospective specialists.

Experience-based learning principle

In the structural competitiveness model of prospective hospitality managers the authors of the article have substantiated experience as a base of a specialist's competitiveness (Katane, Īriste, 2013), therefore one of the principles of the facilitation of specialists' competitiveness in study environment has been chosen *experience-based learning principle.*

Experience-based learning in scientific literature is based and interpreted differently. The most important in such studies is to ensure conditions ***in order a student as a prospective professional could learn from his own experience and the experience of others, as well as could amass new study and professional performance experience during the study process***.

Learning from experience could be viewed from three aspects (Dirkx, Lavin, 1991):
- perspectives, oriented towards an individual and substantiated in the humanistic view on the study process, where knowledge is developed as a result of active experience amassing process, the study results depend on the individual insight into knowledge;
- perspectives, oriented towards an individual's socio-political context and substantiated more in the sociological view on the study process; the studies take place within the cooperation process and their meaning is formed from the totality of different views;
- perspectives, reflecting the development of theoretical base for the facilitation of the learning from experience process; the studies shall take place under the real professional performance environment conditions.

An idea of learning from experience has been viewed by scientists representing different disciplines. Philosophical discussion on whether we acquaint with the world through our feelings or our minds have lasted for centuries (Crosby, 1984). I. Kant finds a way out this intellectual deadlock by making to understand that the source of the global order is in a human mind, instead of being external. According to I. Kant, experience is developed through active structuring of mind. An idea that the cause and the experience are involved in the cognition of the world was further developed in the works of many progressive educators, including J. Dewey (Dewey, 1938), M.P. Follet (Follet, 1932), E. Lindeman (Lindeman, 1926) etc.

In constructivism's philosophical view there is an approach, according to which, any cognition is subjectively constructed – as a result, there are new cognitive constructs of psyche formed; it is an alternative to any metaphysical ontology and epistemological realism (Касавин, 2009). It is philosophical, epistemological and pedagogical approach to studies (Connolly, Begg, 2006).

According to constructivism approach supporters, the surrounding world exists independently if the subject, it cannot be perceived, cognized directly; therefore – it cannot be taught, the knowledge cannot be passed *ready-made*. An individual makes his reality himself, and it is based on the global construct substantiated in his experience (Jonassen, 1991). The individual constructs knowledge for himself so that he could adapt in environment (Piaget, 1977). Besides, he learns more efficiently, if he is involved in the construction of artefacts important for himself.

Knowledge comes into existence and deepens within the interaction of personality and environment. Therefore each of us is unique with our world outlook, views and beliefs. Therefore we are interested in the views of other people; therefore it is important to remain true to one's principles.

L.S. Vygotsky (Vygotsky, 1978) wrote about the different choice offered by each cultural environment, as well as about the models of socio-cultural processes characteristic to it, and thus scientist substantiated the thought on the diversity of the global aspects viewed and heard by individuals from different cultural environments. By observing others in a particular social environment, by receiving their assistance and by cooperating we can adjust the most appropriate behaviour to this environment, as well as to attain more efficient study results. According to researcher, the constructive processes manifest particularly powerfully under the group conditions, where each participant discovers the meaning out of the complex

interaction, where he is involved. L.S. Vygotsky, the supporter of the social view on constructivism, accentuated that knowledge starts at the social level and only later it becomes individual.

L.S. Vygotsky's ideas were developed at the beginning of 1990ies, when in the anthropological study on the solution of problems in the groups of different cultures outside the educational institutions emerged concept *situated learning*, where the cultural and contextual solutions help an individual within the real activity context (Lave, Wenger, 1991; Rogoff, 1990).

S. Gance (Gance, 2002) has identified the main learning components related to constructivism approach, namely, an individual who learns searches for information actively, studying his environment. Secondly, constructivism approach often comprises practical, dialogic interaction with the study environment, where the learning context is very important, which creates the authentic situation for dealing with problems. Thirdly, in constructivism approach the environment comprises social components, which are often interpreted as an interaction with other students and mentors within the actual learning context.

K. Illeris (Illeris, 2003) states that any studies comprise three dimensions, namely the cognitive dimension of knowledge and skills; the emotional dimension of feelings and emotions and the social dimension of cooperation and communication and they all are related within the social context.

P. Freire and J. Mezirow emphasize that the studies are based on the processing of experience, namely critical reflection of our experience. They point out that the study cycle begins with the experience, continues with the reflection, which is followed by an action that becomes the reflection of the particular experience (Rogers, 1996).

In conformity with constructivism approach, which is based on an individual's active performance within the process of knowledge creation and construction, the study process is oriented towards the development of mind, comprising four interrelated elements: 1) acquisition and understanding of knowledge; 2) discovery of new knowledge as a result of the student's independent activities; 3) application of knowledge under new circumstances, i.e. broadening of its borders; 4) inventions – alternative, varied solutions of problems (Brooks, Brooks, 1993).

J. Dewey (Dewey, 1958) states that knowledge and activities are closely related and learning takes place within the activity context, when an individual try to achieve important aims, overcoming different difficulties. D.A. Schön (Schön, 1983; 1987) points out that the professionals learn to think in an action thorugh their experience. Practitioners (in our case prospective hospitality business managers) have their special knowledge code, which is closely related to practice. They apply this *knowledge-in-action* without verbal expression of it; however, they are unable to solve the problem, the *reflect-in-action*, using language, which is specific for the particular professional field. Then, evaluating the event (*reflection- on-action*), they use language characteristic to the professional field, instead of using the scientific language. Thus the professionals raise the level of their learning and improve their *repertoire of experience*, which would be later used for dealing with future problems. It is these abilities of the reflection-on-action and the action differs an efficient practitioner from a less efficient practitioner.

Irrespective of differences between the ideas expressed by various trends of constructivism, as a result of theoretical research (Cannella, Reiff, 1994; Kroll, LaBoskey, 1996; Leino, 1994; Richardson, 1997) there were identified and summarized several common features:
- a student *actively* develops *his own knowledge* with *meaning* and *creatively* and this process takes place *in the interchange*: with *the content*, instead of imitating or repeating, with his *present experience*, as well as with *ideas, conclusions* and *events* during studies;
- the main aim of constructivism *approach* is *metacognition* (*the higher order process of reflecting*), which has a powerful potential *for solving problems*. A student, when facing a problem, he/she can reflect not only on its structure, but also to structure his/her approaches to the problem and to generate alternative, more productive strategies.
- *adaptation* has a cognitive function, the *student* tries to understand and organize knowledge in order to adapt to the environment and to the world in general;
- emotions and motivation have an *essential* role for the development of experience;

- teaching staff/mentor shall be professional – the teaching staff shall be able to integrate study material, pedagogical knowledge, students' qualities, as well as to develop the appropriate study environment.

Several supporters of constructivism approach (Brown, Collins, 1989; Jonassen, 1994) in their research emphasize the necessity for open authentic study environment, where the student could himself develop knowledge important for him. This created the development of ***constructivist learning environment*** guidelines and criteria. The study environment is a place, where students can work together, support each other by applying different means and information sources, while trying to achieve their learning aims and perform problem-solving activities (Gance, 2002; Grabinger, Dunlap, 1995; Wilson, 1996), i.e., applying the principle of self-activity and active learning.

Principle of active learning

Within the great flow of information, the knowledge grows out-of-date very quickly, therefore the new specialists shall continuously perfect knowledge, improve the indicators of the efficiency of their performance.

One of the ways how to achieve the above mentioned is ensuring of the study environment, where there would be promoted *the active learning* of the student as a prospective specialist, which is characterized by participation in problem solving, construction of new knowledge, applying of existing knowledge in practice, by active participation in the processes of thinking, development of interconnections.

Active learning enables students *to speak and listen, write, read, and reason meaningfully* the content of academic subject, *to create* ideas, questions and to awake interest. (Meyer, Jones, 1993, 6). Active learning is a considerable contribution of the student's mental energy and high-level psychological involvement in the study process (Cuseo, 2010).

In another definition of active learning there has been emphasized *thinking* on what the student is doing (Bonwell, Eison, 1991). Active learning is opposed to the conventional study process, where the students is a passive receiver of information (Prince, 2004). Nowadays learning by doing is defined as active learning.

Principle of self-activity has been described by German educator F. Diesterweg (Diesterweg, 1873), who introduces the concepts of self-activity and self-development in the science of pedagogy, and by self-activity he means the activating of own mind, the ability to reason independently, an initiative and the most essential feature of personality. According to his point of view, in an individual, the human trait is his self-activity. Anything human, free, original results from self-activity. Mind, will, memory, thinking, attention is characteristic to all people, they develop through self-activity. Education ends, when an individual starts showing a desire and feel strength to continue self-educational process for the whole life; when he starts to see the ways and methods of such self-education. According to F. Diesterweg's conclusions, the teaching staff's task is to help the student to self-develop abilities granted him by nature. Self-activity is equal to free, independent cognition. Every individual has the right to the development of independent thinking. According to F. Diesterweg's point of view, independent thinking promotes wilful actions in life, namely, by developing self-activity, an individual becomes the master of his life.

Facilitation of personality's self-activity and self-development is the main aim and precondition of education, because an individual acquires education, including new knowledge, as a result of his own diverse actions and efforts. Thus self-activity is both means and result of education. The only one that an individual can obtain from outside is an impulse. A human mind cannot be fulfilled, an individual needs to acquire and understand everything independently. This principle is also topical in modern education: the main aim of education is the facilitation of specialists' independent professional activities.

The significance of individual study subjects shall be determined according to the fact, how much they promote the individual's mental activity and how much an educator facilitates, promotes the students' self-activity.

As a result of respect showed towards the self-activity principle:
- the student's character is developed;
- there is an ability developed to do one's best to achieve the set aim;
- the cognitive abilities are developed;
- both student's intellectual and moral development are facilitated;
- the beliefs are developed;
- meaningful and motivated learning takes place, thus the student's self-development is facilitated.

Within the systems organization of performance, the activity shall be viewed from three aspects (Петровский, 1993): an activity as a precondition of performance, performance stems from an activity; an activity as a dynamic part of already existing performance; an activity – the expanded reproduction moment of performance and a step towards the qualitatively new forms of performance.

As a result of many studies it was discovered that in the systems organization of actions, the biological individual's activity is responsible for the physiology of action, the social individual's activity – for the technology of action, but personality's activity – for the psychology of action. The leading level of psychic regulation, where the activity is organized in action, is the personality; thus the personality participation in action has two aspects: on the one hand – the personality's activity is a factor that makes the action dynamic and stable, preparing in the system the transitions and transformations of its structural elements (for example, the directing of motive towards the aim), on the other hand – the personality's activity is the cause of the development and changes of actions, where the personality functions as a reformer, owner and transformer of an action (Шурыгина, 2012).

Psychological analysis of performance shall be focused on the personality as a subject of performance. In the higher education institution such subject of performance is a student who learns actively. Active learning is an effective self-development means of the personality, including competitiveness, of the student as the prospective specialist.

In order to introduce the principle of active studies at the higher education institution more and more, we should recall Confucius' aphorism: *I hear and I forget. I see and I remember. I do and I understand* (Instruction at..., 2010).

American scientist E. Dale (Dale, 1969), on the basis of own research, in 1969 creates *Cone of Experience*, where at the top there is showed the least efficient study method, namely, listening. The most efficient methods are showed at the base of the cone – direct, purposeful attaining of experience.

A student, on the already existent experience base, knowledge, obtained in other study subjects, through reflection and active learning constructs new knowledge. The obtained knowledge stays in the memory for a longer period of time, awakes interest and motivation to learn, as well as the individual can apply knowledge in different contexts. Several scientists (Божович, 1955; Щукина, 1971) speak about a powerful stimulus for the personality's activity, under the influence of which all psychical processes are more intensive, but the action becomes more fascinating and efficient.

Promotion and facilitation of students' active learning is based on two learning aspects. The significance of emotions for the facilitation of students' activities could be explained with the functioning of central nerve system (Алеева, 2012).

Satisfaction for the accomplished and achieved, joy of discovery and creation, self-actualization are those positive experiences, which are both an integral part of active learning and the 'driving forces or motives of active learning. Therefore the teaching staff, by their experience, knowledge, attitude towards work and students, methodological competency, shall ensure during the organization of active learning such study environment, where the students' positive emotional experiences could be possible.

Study programs, where this principle of active learning is applied, which perform the role of a coordinator, cooperation partner, a leader and organizator, succeed in the preparation of students for the lifelong learning; the new specialists are able more flexible to acquire the new skills and competencies, as well as to adapt easier to the working environment, as well as a greater number of students graduate their studies successfully (Astin, 1997). The development and socialization of

a student as a personality takes place also through the amassing of subjective experience. Through active learning, the students adapt initially seemingly difficult to master study content, thus makes it significant and understandable for themselves, and without any difficulty store it in their memory for a long term, developing the system of stable knowledge.

The experience of the authors of article proves that there may be several types of the manifestation of students' active learning: writing, including making notes, development of reports etc.; speaking: provision of information, exchange of views; popularization, passing and/or exchange of own experience; searching for, evaluation, selection, aggregation and creative applying of necessary information; using of information technologies; research; searching for the ways to solve the problems etc.

The most widely spread active learning methods are the following (Instruction at..., 2010): Active Listening; Active Writing; Visual-based Active Learning; Brainstorming; Collaborative Learning; Team based learning; discussions, Debates; Peer Teaching; Role Playing, Drama, Simulations; Problem-Based Learning (PBL).

The origins of PBL method could be found in Socrates' philosophical discussions with his opponents, where the truth was found by means of conversations and disputes. Initially this method was applied in the USA and Canada for the higher medical studies, when the students, on the basis of symptoms provided by teaching staff, by means of discussions, hypotheses, their knowledge and experience, had to state the patient's diagnosis and recommendable treatment. Thus the student himself, through active learning, reflection, self-directed studies, constructs *deep approach to learning*, as well as assumes responsibility for the research of advanced hypothesis (Biggs, 1999).

PBL studies become more and more topical also for the education of hospitality specialists. The teaching staff/mentor, at the same time also coordinators/counsellors, as well as the significant promoters of the development of metacognitive thinking, associated with the problem-solving processes (Collins, Brown 1991). If a student faces problems regularly, this mobilizes him for dealing with problems. A problem is an obstacle, which should be overcome, and, as a result, the personality develops. According to the point of view of psychology science, this method serves for the development of profound and stable motivation to learn, for the identification of the functioning and development of a student's mind in order to acquire the most important, profound internal interaction and relations from the content of studies for the development of creative approach to studies, for the development of such personality qualities that help to adapt to the changeable social and professional environment (Пилипец, Клименко, 2014).

The results of theoretical research show ***the complexity of the principles of constructivism approach, the diversity of substantiation and interpretation and the considerable variety of implementation***.

Conclusions
- Education is a means for the facilitation of the sustainable development of modern society. In its turn, only such education is sustainable that can meet the present society's needs, as well as its needs from future perspective. One of the basic tasks of modern higher professional education is to facilitate the development of specialists' competitiveness. A prospective specialist's competitiveness could be viewed in the contexts of three different levels: 1) professional professional the competitiveness and sustainability of all society from the future perspective; 2) the competitiveness and sustainable development of the company, where the specialist is employed; 3) the viability, self-perfection and self-realization of a specialist as a self-developing personality under the changeable environment.
- It is important to ensure such study environment at the higher professional education institution that would facilitate and support the development of the prospective specialist's competitiveness. Such study environment shall be open and inclusive.
- Constructivism approach enables to actualize two study principles for the facilitation of specialists' competitiveness: experience-based learning principle and principle of active studies.
- The main aim of constructivism approach is metacognition as the highest level of reflection, which reflects our processes of thinking and dealing with problems and which has a powerful

potential for solving problems. A student, when facing a problem, he/she shall reflect not only on its structure, but also to structure his/her approaches to the problem and to generate alternative, more productive strategies.

- Constructivism approach is based on the insight into experience; the experience ensures the interpretation of past and the anticipation of future. It is like a movement along spiral, where the rotation on the way back is simultaneously overcoming of past and forecasting of future. The construction abilities depend on the skill, in the problem-situation, to identify already known and the different, which has not been acquired yet, these are the abilities to apply already existing knowledge for dealing with new, non-standard tasks, and for this purpose the critical thinking and creativity are also necessary.

- Experience-based learning is necessary in order to ensure the study environment, where the student as a prospective specialist could learn from his or her own experience and the experience of others, as well as could amass new study and professional performance experience during the learning process. The experience-based learning is a self-adjustable, constructive process, where cooperation and exchange of opinions is of particular importance and where, on the base of preliminary experience, there is constructed and amassed new experience, the new cognitive constructs of psyche are formed. Such studies are more fruitful, if they are meaningful and subjectively significant.

- In active learning, the leading role is attributed to the student as a prospective specialist within the self-development process of his personality. It is possible, if an educator fulfils the functions of a counsellor, a guide of thinking, a promoter of activities, a person who encourages and supports, a discussion partner, a provider of necessary psychological, technological, informative environment, as well as a provider of cooperation-based social environment. The facilitation of a personality's self-activity and self-development is the main aim and precondition of education, because the education, including new knowledge, an individual acquires as a result of his own diverse activities and efforts. Thus the self-activity is both means and result of education. Active learning may manifest through very diverse activities. Within the framework of active studies, PBL are actualized.

- Experience-based learning and active learning are important principles for the facilitation of specialists' competitiveness in the study environment of higher education institution. The results of theoretical research show the complexity of the principles of constructivism approach, the diversity of substantiation and interpretation and the considerable variety of implementation. Important aspects of the implementation of both principles are cooperation, discussions as a process of the exchange of views, amassing of social experience, including communication, and search for the possibilities to solve professional problems. This forms the basis for the competent, independent and responsible professional activities, which is a precondition for the development of a prospective specialist's competitiveness, one of the types of the manifestation of competitiveness and also the result of the development of competitiveness in the study environment of the higher education institution.

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Class Lessons as a Means for Promoting Supportive Social Environment

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Abstract: The key objective of school is the learner's socialization. Class can be considered as the micro-system of the society and class lessons as the means of socialization that promotes safe social environment. According to education ecology the class environment is the micro environment, the peer group that is important for the child and with which the child is in direct interaction which, in its turn, affects the child's development. This is the place where the understanding of societal values and behaviour norms; the attitude to oneself and the others is formed. The social environment of the class is the interpersonal relations among concrete individuals with the aim to find out and understand the other person's desires, needs and opinions. Main indicators characterizing the social environment are mutual relations, attitudes, interaction, communication, roles and the desired qualities in the class environment are the mutual trust, cooperation, respect, the sense of belonging, the sense of safety and self-discipline. The class lessons serve as the means for promoting supporting social environment. Their effectiveness in the frame of this aspect is explored surveying 140 pupils who are 11-19 years old. The article allows concluding to what extent supporting social environment in the class depends explicitly on the class teacher's personality. Respect to pupils' opinions and freer atmosphere in class lessons are emphasized as positive factors promoting the social environment. The negative ones are considerable shortcomings in the organization of class lessons and ignorance of pupils' needs and desires.

Key words: class lessons, supporting social environment, school education.

Introduction

The key objective of school is the learner's socialization. This can be performed with the help of upbringing and the teaching/learning process and one of the components of the teaching/learning environment that carries out this objecgtive is the social environment of the class in which pupils accumulate the experience of culture, behaviour and mutual relations.

The social environment as the interpersonal relations is the relations among concrete persons aimed at finding out the desires, needs and opinions of another person. The key indicators of the social environment are – mutual relations, attitudes, interrelations, communication, roles in which the desired qualities are mutual trust, mutual respect, the sense of beonging, the sense of safety, self-discipline (Garleja, 2006).

The research shows that the pupil's academic achievement correlates with the mutal relations in the class, the cooperation skills in the collective (Huber, Hameyer, 2000; Šūmane, 2012). One of the possibilities how to promote a supportive social environment is the class lessons therefore the aim of the article is to explore pupils' thoughts about the class lessons and their importance in promoting a supportive social environment. Research methods used in the article are the analysis of literature and sources, questionnairing and express interviews.

According to U.Bronfenbrenner, the most important part of the Ecology of human development theory is the micro-system with which the child is in direct interaction and which affects the child's development - first of all, the family but during schooling also school and a peer group that is significant for the child joins this part of the environment (Bronfenbrenner, 1981). Thus class can be considered the micro-system of the society and class lessons as the means of socialization that promotes the social environment.

 It is possible to start speaking about the class education and class teacher in Latvia since the 70s of the 19th century when the territory of Latvia was included in the Russian Empire. The regulations on the class teacher in gymnasia and pro-gymnasia were issued in 1871. Teachers were appointed as class teachers. The scope of their responsibilities was wide- dealing with the documentation, exploration of learners' academic achievement, behaviour, abilities as well as monthly "small pedagogicl meetings".

However, class lessons at this time were not yet included in the teaching syllabi (Рожков, 2001). Class lessons are not spoken about during the years of first independent Latvia (1918-1940). The media *Monthly of Ministry of Education* (Izglītības Ministrijas Mēnešraksts) do not publish any articles about certain class lessons. Therefore we can conclude that upbringing during this period was accomplished at general lessons and out-of-class activities.

During the Soviet period the key responsibility of the class teacher was the consolidation of the class collective, the work with the pioneer and young communist league organizations, supervision of pupils' discipline and academic achievement. Having one class lesson a week was compulsory (Рожков, 2001). According to the data received from the express interview (12 pupils of the Soviet period), the class lessons usually were devoted to political information, „getting ready to different pioneer events", speaking about academic achievement and discipline, cleaning and arranging of the class and often the lesson did not take place or "they were let free sooner".

After 1990 when the social political and economic situation changed no transformations took place in the organization/structure of class lesson institution. As in the previous periods the class teacher's responsibilities included dealing with the documentation, care about the pupils' health, academic achievement, behaviour.

The class teacher's work basically is characterized by 3 areas of action (Figure 1):
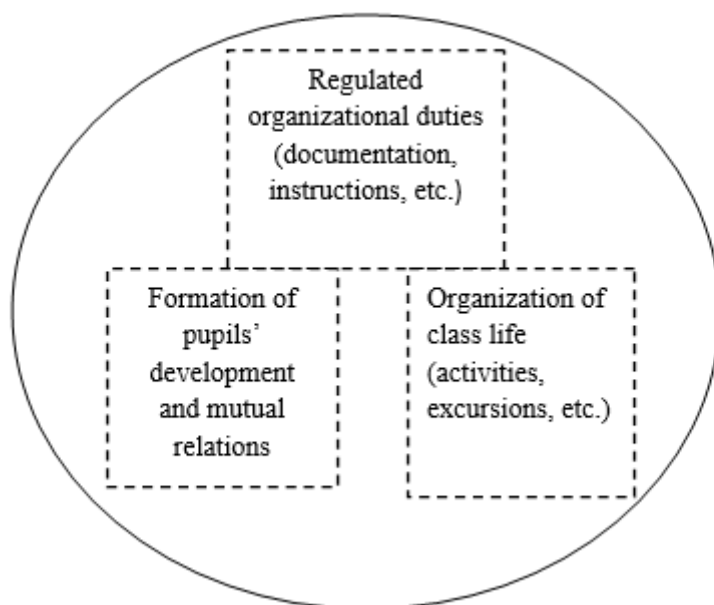
Figure 1. Action areas of the class teacher (Becker, Lutz, 2001).

The teacher's cooperation with the class and the implementation of the delegated duties is connected with the diverse activities of the teaching/learning process and out-of-class activities in which one of the organization forms of the pedagogical process is the class lesson.

If the teaching plan includes one lesson that actually is intended for the pupils' socialization it is essential to find out whether it performs its objectives – to develop pupils' life skills and form the attitude to oneself, the family, class, school, environment, work, culture, society, country (Klases stundu..., 2006), in other words, to promote a supportive social environment in which pupils can gain experience and at the same time feel belonging.

Methodology

Questionnairing was chosen as the most suitable method for obtaining the outcomes of this research (Wiersma, Jurs, 2005). Although the questionnairing data cannot be generalized applying them to the whole Latvia because they are obtained on the basis of answers provided by 140 respondents (from Riga and from towns near Riga) nevertheless they allow making conclusions about class lessons in pupils' experience. The respondents' sample for the research was formed by the random principle- pupils who

wanted participated in the questionnairing. The respondents' age is 11 to 19 years. Primary school pupils were not included in the research on purpose because their experience is relatively short as well as the class teacher in primary school actually spends the whole day together with her pupils. The authors of the article divided the respondents into two groups: forms 5-10 and forms 11-12. During the last two forms of the secondary school the pupils' status changes – there is a transition "from child - to adult". This has also been indicated in the documents of the Republic of Latvia which defines the transition to the adult's status starting from the age of 18. Thus it can be assumed that the answers given by 18 years old young people in the research related to class lessons could present other trends.

Results and Discussions

The findings in the questionnairing about class lessons as the means promoting a supportive social environment reveal pupils' experience in this aspect. The questionnaire contains 6 questions. They included both open and closed questions. In order to explore pupils' experience the questionnaire included also questions about the organization of lessons as well as questions that helped to identify pupils' attitude to class lessons as the means promoting social environment. 5% of respondents have answered about teaching lessons because they had not understood the essence of the questionnaire.

The first question in the questionnaire was a closed one "Are class lessons necessary?" (Figure 2). Respondents from forms 5-10 – in 63% of cases had answered „No", in forms 11-12 – 72%.
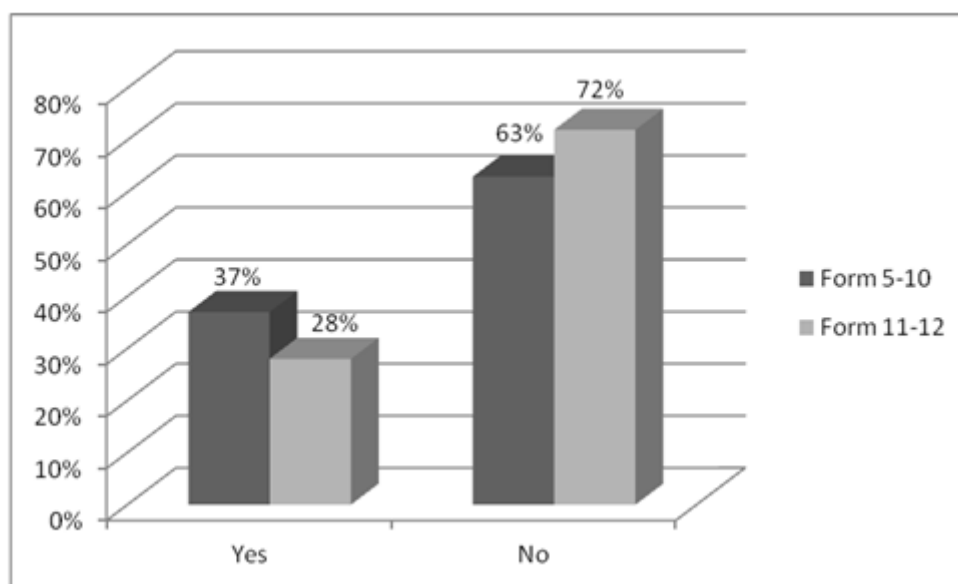
Figure 2. Respondents' answers to the question "Are class lessons necessary?"

This proves pupils' negative attitude to these lessons; however, the authors of the article concede that answers about teaching lessons coud be similar. For all that as regards Question 2 „Do you like attending class lessons?" (Figure 3) 81% of form 5-10 respondents answered „Yes", in forms 11-12 – 57%. Thus class lessons could be a significant means for promoting a supportive social environment.
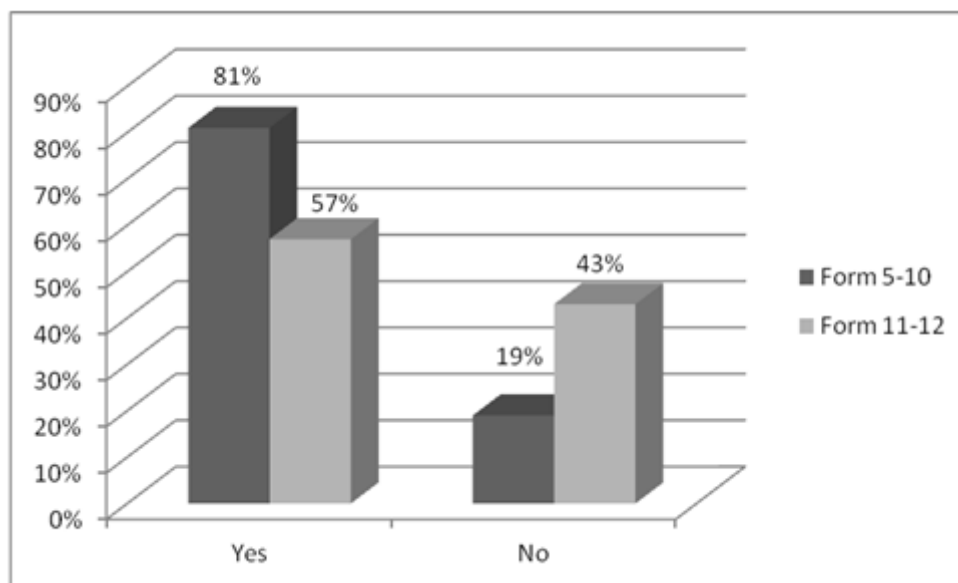
Figure 3. Respondents' answers to the question „Do you like attending class lessons?".

The authors of the article consider that it is important to find out what pupils do in these lessons in cooperation with the class teacher. Primary level pupils have emphasized the discussion of different organizational issues („we speak about what is happening at school"), getting ready for different events, the analysis of academic achievement, speaking about safety regulations. Thus we can conclude that class lessons are mainly devoted to solving organizational issues. Comparing it with the sample program of class lessons pupils' answers touch upon also such thematic issues as career („about future plans"), pupils' self-exploration („we fill in questionnaires"). Respondents' answers in the secondary level group are similar. However, they emphasize more the discussion of topical class, school, society problems (68%). This indicates that class teachers when organizing class lessons take into account pupils' needs and topical issues.

Several thematic blocs can be singled out in pupils' answers to the question "Which topics would you include in class lessons?" at primary level:

- career: „about future", „higher education institutions",
- pupils' personality – personal hygiene („about order", „our hygiene"), interests   „about hobbies", „sports"),
- mutual relations („about relations with classmates, parents", „about our friends", „to learn more about the classmates").

This allows concluding that class lessons in this case are the means for promoting the social environment.

Yet only 42% primary level pupils answered this question. We can assume that they are satisfied with the offered themes or they are not interested in the planning and implementation of these lessons.

All young people in the secondary level group have written in some answer. 30% admit that nothing is needed in these lessons, that the issues put forward each time have to be solved. As the pupils' career becomes the closest aim at this stage then several of them have stressed the topic about career, the need for tests related to the choice of different professions. The request of secondary level pupils for such topics as learning, motivation, behaviour is closely linked with the abve mentioned. Pupils of this level also want to speak about mutual relations. Two respondents have indicated that the choice of topics is the teacher's responsibility, thus pupils consider that their thoughts are insignificant and do not count or they in general do not want to engage in the planning of class lessons.

The questionnaire contained the request to tell about the most interesting class lesson. Two extremely opposite versions of answers prevail at the primary level – all are interesting (12%) or there have not been such lessons (47%). Pupils consider interesting those lessons with the participation of the social pedagogue who had heped to solve mutual disagreements, the lesson about the career planning, and

getting ready for the Christmas party. There were enough many answers (15%) having a hidden answer that the best were those lessons in which they quickly did what had been planned and then they "had free time". Secondary level pupils have indicated such lessons which had something unusual/extraordinary, e.g., the first and last class lesson of the year, discussions after the excursion (violation of pupils' regulations), preparing performances, discussion of the Ķekaviņa river project, and childhood stories.

Anallysis of the respondents' experience about the class lessons allows pointing out positive features (Gordon, 1997):

- the class teacher's personality („we have very good relations with the class teacher, she is like a big sister to us, sometimes even as a grandmother"; „I like my class teacher ");
- discussions on topics interesting for adolescents and young people („usually we discuss topics important for our class");
- freer atmosphere, the knowledge and skills are not assessed („these are lessons of relaxation", „I feel better in them", „we don't need to learn"). Teacher's style of work in the class that defines the culture of mutual relations in the everyday life of the class plays a huge role in the creation of the social atmosphere of the class and though indirectly but essentially influences the pupil's learning and the quality of learning. Mutual relations between the teacher and the pupil are good if they are open to each other and they are characterized by mutual care, dependence and at the same time the ability not to restrict the other person's freedom. There is positive atmosphere in the class if it supports the pupils' growth and development. Thus the teacher has to manage the environment, time and activities in such a way that there was more time for learning and creative expression in the teaching/learning process.

The aspect of discussion on interesting topics indicates the essential role of the communicative activity because only the teacher's attitude that promotes communication fosters the development of abilities of school age children allowing them to ne different, unique and to gain success in different ways (Maslo, 2006).

Students' experience presents also negative features:

- inexpedient use of time („it is mere waste of time", „what can be said in some sentences is extended in 40 minutes"),
- uninteresting lessons („again and again we discuss topics as old as the world"),
- teaching of the class teacher's subject in the class lesson,
- usually it is planned as the last lesson („it is the 8th lesson and I am exhausted"),
- ignoring the pupils' opinion („I want that everything I say and think is heard").

Processing of pupil's subjecive experience plays an important role in the formation of the social environment of the class (Fend, 1991). This research shows that pupils are not involved in the planning of class lessons, issues that are important to them are not taken into consideration. Thus a supportive social environment fails to form effectively. Class lessons should be on the theme topical for pupils. If the theme is demanded by the society but it does not seem significant for the pupils then the teacher has to prepare specially for these lessons to make them attractive and exciting. The topics of class lessons have to be planned together with the class and pupils have to be involved in the preparation and delivery of these lessons.

The findings of other research also prove that regular class activities, e.g., morning meetings (Allen-Hughes, 2013), form a safe place in which pupils can learn and practice their social skills, for instance, empathy, active listening, the discussion skill and problem solving skill, cooperate, gain new friends, improve mutual respect and class collective.

Man as a social being possesses the necessity to feel that he belongs to something, that he has his own place in the family, class and those social groups which are very significant in his life. It is important for the teenager and young person to be integrated as an element in some wholeness, to be accepted in his/her family, school, society. The most important needs in the social environment of the class are the desire for new adventures, safety, responce and acknowledgement (Balsons, 1995).

Pupils' recommendations that have formed in their experience and are related to class lessons as the means for developing a supportive social environment are significant and should be taken into consideration:

- about the organization: class lessons should take place once a moth or once in a fortnight; they can take place during the breaks or it can be held in case of need; these suggestions were proposed by secondary level pupils because they have very big learning load;
- about the content: the topics for class lessons should not be defined in a centralized manner. They have to lessons planned by pupils in cooperation with the teacher. They should include only those topics that are really topical for the pupils because most of the class lessons are formal. The lessons should become more personal. Pupils advise the school administration that these lessons should not be observed because they are only for the pupils and their class teacher. („All that happens in class lessons is private").

Analyzing factors that describe the social environment of the class, M. Freitag (Freitag, 1998) has formulated 4 aspects:

- teacher's individual peculiarities and teacher's attitude (gender, age, experience, class management style, self-value, competence);
- pupil's individual peculiarities (gender, age, belonging, social competence, self-value);
- iInteraction and attitude between pupils and teachers (discipline, faithfulness, discussion style);
- interaction and attitude among pupils themselves (support, competition, discipline, class size and community).

The results of the questionnairing show that all four aspects are present in respondents' answers therefore we can claim that class lessons are the means of promoting the social environment; however, it is necessary to think how to form, structure the class lessons so that this social environment is supportive.

Conclusions

- The most important part of the Ecology of human development theory is the micro-system with which the child is in direct interaction and which promotes the child's development - the family, school and a peer group that is significant for the child. The class can be considered the micro-system of the society and class lessons as the means of socialization that promotes the supportive social environment: develops pupils' life skills and promotes the formation of the attitude towards oneself, family, class, school, environment, work, culture, society, country.
- The majority of respondents indicated (in primary level group, secondary level group) that class lessons are not necessary. Thus this identifies the problem – class lessons that are meant for pupils'self-expression, self-organization, that would help them become freer, more independent and responsible, would form their belonging to the school and class, would satisfy pupils' needs for interaction and cooperation with peers and adults, for the dialogue about the diverse issues of life are not necessary for the pupils. Consequently, class lessons do not promote supportive social environment.
- At the same time pupils want such lessons that would deal with the topics important for them. Therefore teachers have to make the thematic planning of class lessons in cooperation with pupils so that these lessons become important for every pupil, so that they reveal connections among different factors of the teaching/learning process and a supportive social environment: academic achievement, the attitude to school, discipline and self-discipline, selfesteem, learning load, fear, aggression, motivation.
- It is necessary to develop new, diverse recommendations for the class lesson. At the time when the image of the child changes putting the "action child" to the forefront teachers no longer can use the traditional methods of upbringing; they simply do not work.

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Workplace-Based Learning as One of the Ways of the Implementation of Ecological Approach in Education

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Abstract: A human being as a personality and also as a specialist develops in the interaction with his/her life and action environment: family environment, educational environment, environment of professional activities etc. In order the educational environment would facilitate and support the development of an individual, including the development of his/her competitiveness, such environment shall become an open and inclusive one, performing many and different functions. The ecological approach offers a wide range of opportunities regarding performing of interdisciplinary research in the educational sciences, as well as comprises significant potential of innovative, creative pedagogical activities in practice. One of the ways of the implementation of ecological approach is the workplace-based learning. The aim of research: to substantiate theoretically the workplace-based learning for the facilitation of the professional development of prospective and/or already working specialists. The workplace-based learning is both scientific conception and strategy for the elaboration and development of professional education dual system in the state-level educational policy and educational management fields. The concept of workplace-based learning has both wide and narrow meaning. According the wide meaning, the workplace-based learning facilitates the lifelong professional development of an individual for which the environment of professional activities is very important. According to the narrow meaning, the workplace-based learning means the organization of prospective specialists' practice at the companies. The conception of workplace-based learning provides that the environment of professional education consists of two components: from the environment of educational establishment and from the base organization as the environment of professional activities. In the dual system of professional education both these environments form an indivisible integral entirety. The ecological approach provides a perspective for the sustainable development of dual professional education.

Keywords: dual system of professional education, ecological approach, workplace-based learning.

Introduction

A human being as a personality and also as a specialist develops in the interaction with his or her life and action environment: family environment, educational environment, environment of professional activities etc.

One of the topicalities of modern education is to assist an individual to cognize his or her life and action environment: 1) in order to adapt to and better integrate into this environment through changing oneself; 2) in order to help to see the opportunities for one's own development in the life and action environment through developing and improving oneself; 3) in order by own innovative, creative and at the same time responsible action could develop, change, improve his or her life and action environment; 4) in order an individual would learn to adapt to continuous changes in the society, educational environment, labour market, in the environment of professional activities etc..

In order the educational environment would facilitate and support the development of an individual, including the development of his or her competitiveness, such environment shall become an open and inclusive one, performing many and different functions.

In the 20th century education, theory and practice of pedagogy, the imperative is the ecological paradigm and the ecological approach resulting from it. The ecological approach is one of the important preconditions for ensuring the sustainable development of education. The ecological approach in education has many different manifestations and also the ways of implementation. One of such ways is the workplace-based learning.

The aim of the research: to substantiate theoretically the workplace-based learning for the facilitation of the professional development of competitiveness of prospective and already working specialists.

Methodology

The ecological paradigm has become not only an interdisciplinary paradigm but also a transdisciplinary paradigm. The Human Ecology has rapidly developed, and the Ecology of Education is an important interdisciplinary direction of educational research within the Human Ecology.

Ecological approach in education is substantiated and interpreted as:
- the theory and methodology of research and pedagogical actions, the strategy for the modelling, development and maintenance of environment facilitating an individual's development and meeting his or her needs (Сулима, 2012);
- an entirety of theory and technology, which helps to study and improve the components of environment, to forecast and model the positive and facilitating influence of environment on an individual's development, as well as to evaluate the educational potential of environment, because environment is an interaction system the subject of which is a human being (Мануйлов, 2002; 2008);
- the philosophic-methodological basis for the educational, pedagogical or study process management strategy, which determines that, by ensuring environment favourable for an individual's development, meeting an individual's interests, aims and needs, it is possible to influence the formation and development of an individual's personality; it is a way of pedagogical reality cognition, analysis, evaluation, as well as transformation, discovering and respecting the regularities existing in this environment: interconnections and causations that help to plan, design and produce the results of this interconnection process (Боровская, 2011);
- the conceptual approach in theory and practice, including research activities, that might comprise: *the holistic approach* (perception and research of separate things and phenomena from their holistic perspective, *the effect of "puzzle"*), *systems approach* (systemic thinking that enables to see the structure and functioning of the interconnection and causation of things and phenomena within the time and space; *the multidimensional/complex approach* (that enables to cognize things and phenomena according to different views/aspects, developing "dimensional", multi-aspect view on the essence of things, phenomena), thus ensuring the entirety approach (Katane, 2005; 2006; 2007).

Thus the ecological approach has considerable heuristic potential, because this approach marks several new perspectives in the scientific action, as well as very diverse implementation opportunities in the practice of pedagogical activities. At the same time the understanding and acquisition of the essence and semantic meaning of ecological approach ask of the researcher and/or educator time and effort, because this approach demands, first of all, the change of thinking by developing and improving systemic and contextual thinking that ensures the entirety view on the problem under research and/or to be dealt with. The ecological approach offers a wide range of opportunities to perform interdisciplinary research in the educational sciences, as well as it comprises the great potential of innovative, creative pedagogical activities in practice.

Methods of the research: study, analysis and evaluation of scientific literature; reflection of authors' exploratory pedagogical experience.

Results and discussion

The workplace-based learning is both conception and strategy based on the ecological approach in education. The workplace-based learning is also one of the principles of ecological approach. The concept *workplace-based learning* is used in both wide and narrow meaning. According to their *wide meaning*, the workplace-based learning answers the conceptual question: how could be facilitated the professional transformation (development) of an individual, his or her professional self-determination and development as the lifelong process, where the development of the prospective specialist's/employed specialist's competitiveness within the career development process.
The wide meaning of the concept *workplace-based learning* envisages (Darche, Nayar, 2009):

- acquisition of the working environment of different professions by organizing the following events for pupils within the framework of career education different activities;

- organization of studies not only in the environment of a professional education institution and/or a university, but also in the working environment of companies, thus developing the uniform study environment by cooperating with the associations of employers in particular sectors and with particular companies ready to cooperate with the higher education institutions;
- simulation of the situations of professional actions, role-plays; organization of students' practice at the companies; the post-diploma internship;
- establishment and management of students' companies.

There are formulated three basic approaches of workplace-based learning out of which the diversity of workplace-based learning stems (Boud, Solomon, 2001; Gray, 2001; Clarke, Copeland, 2003; Lamanski, Mewis, 2011):

- *studies for work:* the student as the prospective specialist studies meaningfully, obtains new knowledge, skills, competencies necessary in order he or she could commence his or her independent professional activities;
- *studies in the working environment:* in the direct interaction with the environment of professional activities at the company, the student acquaints with the specificity of this environment, connecting his or her theoretical knowledge with the processes, which take place in practice, assessing his or her own readiness for work in this environment, developing his or her professional identity;
- *studies through work:* obtaining of new knowledge, skills and competencies by doing particular work, dealing with problems in the environment of professional activities, instead of the academic environment of university.

Thus, as a result of workplace-based learning, the studies from the conventional educational environment of a higher education institution are being moved to the environment of professional activities. The workplace-based learning offers new opportunities of professional education and perspectives for the preparation of prospective specialists.

Firstly, these are the study programmes, which are developed and implemented, while the university cooperates with a company/companies, in order the student would start to acquaint with the specificity of the environment of professional activities, at the beginning – through learning from the experience of other specialists, but then gradually obtaining also his or her experience in the environment of professional activities.

In order the implementation of the conception and the strategy of workplace-based learning for the organization of prospective specialists' study process would be fruitful, there are several preconditions (Lamanski, Mewis, 2011; Siebert, Mills, 2009; Sodiechowska, Maisch, 2006):

- *transition from the educator-centred studies to the student-centred* studies;
- *close cooperation at the institutional level*: the higher education institution – the company as the environment of professional activities not only within the program implementation process, but also considerably earlier, namely, within the process of the development of the study programme or the study plan and during the formulation of study aims and tasks, coordinating the study aims and the aims of company's activities and its environmental specificity;
- *close cooperation at the level: teaching staff of higher education institution-mentors*, which manifests as both coordinated achievement of common study aims and the exchange of experience, and mutual and common studies, when the professional skills are being improved by both teaching staff of the higher education institution and mentors at the organization/company.

The workplace-based learning envisages also the individualization of study process, because the students do not always study in a group in the environment of professional activities; most often they must integrate into this working environment with their individual study tasks and they must perform a particular role by fulfilling particular responsibilities, because they have full-time job at this company, and their study programme has been introduced at the workplace and coordinated with the aims and specificity of the activities of organization/company. The workplace-based learning is oriented towards the aim that the student as the prospective specialist would start to acquaint with the real work (Sodiechowska, Maisch, 2006).

At the beginning, the conception of workplace-based learning becames popular in the primary and secondary vocational education; however, now it becomes more and more important also for the higher professional education.

The workplace-based learning offers opportunities to study, becoming acquainted with the real *world of profession* and using the experience already amassed by professionals and developing own experience in the real environment of professional activities. The workplace-based learning has several advantages. They help to (Darche, Nayar, 2009):

- engage and motivate students to study, combining learning in a classroom and practical activities in the working environment, respecting not only the study aims, but also students' personal and career interests, needs and aims;
- ensure the educational quality of a higher educational institution;
- direct the students to the professional thinking by developing critical thinking and enabling them to take part in the solution of problems;
- contextualize studies, because the environmental contexts of professional activities are important, offering a wide range of enculturalization and social learning opportunities in the practice community;
- the student to develop both socially and emotionally to integrate into the world of adults, including the development of one's own personality and professional identity;
- develop and expand the social network of students' cooperation, which is very important within the context of competitiveness, including marketability and employability;
- improve the students' professional competency, for example, within the mutual communication and a team's working process, when planning and implementing a project in the working environment;
- acquaint with the requirements set by the labour market and the employers' requirements in the environment of professional activities;
- the student to assess his or her professional experience, motivating to self-develop and improve own skills professionally.

The significance of the workplace-based learning should be understood not only by an educator/teaching staff of higher education institution and a mentor at the company, but also by the student as the prospective specialist, evaluating the difference between educator-centred approach and student-centred approach; between the studies that are oriented by books and instructions and take place in the environment of a higher education institution and the action-oriented studies in the complex or dual study environment, where the integral components are both the academic environment of a higher education institution and the environment of professional activities in the company/organization. Thus, we can say that the workplace-based learning, according to their essence, is modifying or transformative studies. As a result of *transformative or modifying studies* for which the exchange of views, substantiated discussions are very important, the student as the prospective specialist develops his or her world outlook, the conceptual insight into the professional activities, obtains systemic knowledge personally important for him or her, which, in its turn, ensures the entirety view; the student as the prospective specialist develops reasoning, the ability to apply knowledge and skills creatively and taking into account the particular situation for the solution of problems, he or she develops critical thinking and the ability to take decisions. As a result of workplace-based learning, an individual develops the scale of values, which changes continuously, and this causes also the changes in the system of attitudes.

The conception of workplace-based learning is closely related to the conception of science organization or the learning organization (Katane, Kristovska, 2015), because serves as a methodological basis for the facilitation of specialists' professional development, the methodological basis for the facilitation of the development of career and competitiveness of specialists at the company/organization, where these specialists are working, envisaging a wide range of opportunities for the exchange of experience and in-service training at both their and other company/organization. For this purpose it is necessary to have the coordinated work of a support team of specialists in the fields of the research of the competitiveness of company's employees, including diagnostics, mentoring, career consulting and human resources management.

The narrow meaning of the concept of *workplace-based learning* is related to the organization of students' professional practice in the working environment of base companies.

The workplace-based learning in the European educational space is topical at the level of educational policy and educational management, because each country develops its conception of the workplace-based learning, the strategic programs for the development of professional education. Alongside with the workplace-based learning, the concept of **the dual system of professional education** has emerged in the European educational space*,* which envisages the change of thinking and actions in the professional education. Several European countries (Austria, Denmark, Finland, France, Germany, Great Britain, Norway, Sweden, etc.) have already obtained experience regarding the development of the dual system of professional education, because the workplace-based learning has been acknowledged as one of the priorities of professional education. In many of the above mentioned countries there are being developed not only the guidelines, strategic documents for the introduction of the workplace-based learning, but also there has been funding allocated from the state budget (Stiprāka profesionālā izglītība .. , 2015; Work-Based Learning .. , 2013).

In the documents of European Commission the concept *the workplace-based learning* has three meanings (Stratēģiskās politikas .. , 2015): 1) apprenticeship within the framework of the dual system of professional education; 2) the process of professional education, where the study periods at the educational institution and in the working environment of companies alternate: *the sandwich* model; 3) educational institution, expanding its material and technical basis, arrange laboratories, workshops, kitchens, restaurants, trade centres or manufacturing companies as the sub-units, providing students with the working environment, which is brought nearer to the real conditions to its utmost, where the practical studies take place and the students do both simulation of working situations, deal with problems, as well as are engaged in business or particular tasks of industry.

Germany plays the leading role in the development of the dual system of professional education, and many countries learn from the experience of Germany not only in Europe, but throughout the world (Соловьева, 2013). It is Germany, where the origin of the idea of workplace-based learning could be found, because German educational theorist G.M. Kerschensteiner (Kerschensteiner, 1912) developed the conception of *a work school*, which was implemented in reality, pointing out that the best and the most fruitful learning is through own practical actions, obtaining the working experience.

The workplace-based learning has become also the topicality of Latvian educational policy and management, developing the dual system of professional education in the country (2015./2016. mācību gada aktualitātes .. , 2015; Līce, 2015). Several professional education institutions of Latvia, in cooperation with their partners – different companies – have already obtained experience regarding the implementation of workplace-based learning in practice (Rozenberga, 2014). In Latvia the specialists are already being educated upon the employers' request (Baranovska u.c., 2015).

The professional experience of the authors of article proves that the workplace-based learning actualizes a range of problems to be dealt with in order to ensure the quality of professional education.

- Not all companies are ready to take part in the provision of professional education.
- The issues regarding the financing of dual system must be dealt with.
- There is a viewpoint of great vitality among the specialists: why should I share with my experience, with my *know how* and *know why*, thus creating young competitors for myself. The specialists shall receive the professional support of psychologists, educators/teaching staff of educational institutions in order to develop their psychological readiness to take part in mentoring.
- One of the most urgent problems is the pedagogical competency level, including methodological competency, of company's specialists who fulfil the mentors' functions. Therefore many educational institutions offer their cooperation partners the opportunities to improve professional skills within the formal and non-formal educational process by organizing courses, seminars etc. on the pedagogical themes. It is important that the specialists of the respective field perform pedagogical activities as mentors, self-educating themselves regarding both professional and pedagogical field on an ongoing basis.

It is important to be aware and deal with the existing contradictions and problems in order to ensure the quality of workplace-based learning and the sustainability of dual professional education.

Conclusions
- The workplace-based learning is both conception and strategy based on the ecological approach in education. The workplace-based learning is also one of the principles of ecological approach.
- There are many and different interpretations of the workplace-based learning in the global scientific space, where it is possible to see several meanings: 1) according to the wide meaning, the workplace-based learning is possible during an individual's professional development process within the lifetime: starting with the career education at school; continuing the education of prospective specialists in the environment of professional activities; ensuring the improvement of the professional skills of already working specialists, as well as in-service training and exchange of experience at both their companies and other companies, when the company may become simultaneously both an educational organization teaching and an organization studying; 2) in the workplace-based learning is characterized only and merely in relation to the vocational education or the higher professional education, as the organizational strategy of studies for the facilitation of prospective specialists' professional development and competitiveness, when the study programmes an study plans are developed and implemented in cooperation with a company as the environment of professional activities, where the prospective specialist obtains his or her experience as both student and company's employee; usually, in this meaning, the workplace-based learning is the strategy how a sector of the national economy or a particular company prepares for its aims and needs the new specialists who after the acquisition of professional education work in this field of professional activities and/or a particular company; 3) according to the narrow meaning, the workplace-based learning is related to the professional practice of students as prospective specialists at the base companies of educational institutions.
- The workplace-based learning may manifest in many forms. It is conventional to identify three types of workplace-based learning: 1) studies for work; 2) studies in the working environment; 3) studies through work or by means of work, while being active.
- The workplace-based learning not only facilitates the professional development, but also the formation of professional identity and competitiveness, because the student's thinking changes from "*I and environment of professional activities*" to "*I within environment of professional activities*". The workplace-based learning facilitates the development of the prospective specialist's readiness for independent and responsible professional activities.
- Workplace-based learning, according to their essence, is transformative study process, and, as a result, the prospective specialist develops his or her world outlook, the conceptual insight into professional activities; he or she obtains systems knowledge important for him or her that, in its turn, ensures the view of the entirety; there is reasoning developed, the ability to apply knowledge and skills creatively and taking into consideration the particular situation for the solution of problems; the critical thinking and the ability to take decisions are developed. This all-in-all is a prospective specialist's gain in a form of obtained experience.
- The workplace-based learning in many European countries is the topicality at the level of state educational policy and educational management and the priority of professional education. Alongside with the workplace-based learning there has the concept *the dual system of professional education* has emerged in the European educational space. In many European countries there has been experience obtained regarding the implementation of workplace-based learning at the level of both state educational policy and educational management, as well as at the institutional level. Several European countries not only elaborate the programmes, strategies, conceptions of educational policy, but also allocate the funding from the state budget for the workplace-based learning. Germany plays the leading role in the implementation of the dual system of professional education, and the experience of Germany is being adopted by many countries, including Latvia.
- Alongside with the implementation of workplace-based learning in practice, several problems are actualized, which shall be solved. One of them is the development of the professional and pedagogical competency of the specialists of particular professional field who fulfil also the

mentors' functions, and the above mentioned development is achieved through the improvement of professional skills within the framework of formal and non-formal pedagogical education programmes, as well as during the self-educational process.

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The Importance of Nature Protection Areas for Conservation Education: The Case of Kozjansko Regional Park in Slovenia

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Abstract: Nature protection areas play an important role in ensuring people's direct contact with nature, especially in developed countries, where pristine natural environments are rare, scattered, and disappearing. Empirical and theoretical evidence support the role of nature in cognitive, affective, and value-related development among children and adolescents. This article examines the effectiveness of educational activities for primary school students in Kozjansko Regional Park (*Kozjanski regijski park*) in southeast Slovenia. The main research goal was to investigate students' knowledge and attitudes towards the park's natural and cultural heritage. A questionnaire was developed and administered to students at all six primary schools within the park. Next, semi-structured interviews with park staff and primary school teachers were conducted in order to set standards for future collaboration and development of educational activities. The results show that the 236 participating students had moderate knowledge about the natural and cultural heritage of the park even though the majority had positive attitudes toward natural and cultural heritage. There was a weak positive correlation between students' knowledge about and attitudes toward natural and cultural heritage. There was no correlation between students' attitudes toward natural and cultural heritage and their overall academic performance or grades in biology and science. Female students had more positive attitudes toward natural and cultural heritage; they also showed more interest in biology and science subjects at school. Sex differences in knowledge were not significant. The park staff reported that their main goal was to educate and orient students toward nature protection. The teachers find their collaboration with the park managers satisfactory and they share mutual educational goals. They would like to continue this good cooperation. Students should have regular opportunities to explore their local natural environments, to learn more about natural and cultural heritage, and to be actively involved in preparing and carrying out conservation activities. It is also important for teachers to make biology and science education more exciting and meaningful for students to increase their interest.

Keywords: school education, knowledge, attitudes, nature protection, teacher, Slovenia.

Introduction

Nature protection areas play an important role in ensuring people's direct contact with nature, especially in developed countries, where pristine natural environments are rare, scattered, and disappearing. Empirical and theoretical evidence support the role of nature in cognitive, affective, and value-related development among children (Kahn, Kellert, 2002). Conservation education is a relatively unknown term, especially in Europe. Conservation education focuses on nature and natural resources, and emphasizes capabilities to solve environmental problems. Conservation education programs are meant to help people understand these issues and develop an ethic that will support a host of conservation behaviors (Jacobson, McDuff…, 2007). Various authors also stress that many school programs include environmental topics, but too few focus on achieving conservational goals. Conservation education shares many goals with environmental education, providing learners with the opportunity to gain environmental awareness, knowledge, attitudes, and skills and to participate in problem-solving (UNESCO, 1978). According to J. Palmer, B. Bajd, D. Mati, and E.Tsaliki (Palmer, Bajd…, 1998), formal programs in environmental education alone are not effective enough for educating young people on how to save the planet. Studies suggest that there is a need to establish an education system including formal and informal programs. J. Palmer and J. Birch (2003) stressed the importance of informal environmental education, including communication and information, which results from living and interacting in a particular locality and community, using newspapers, television, radio, other media, and "events" in an individual's life and the wider world, and interacting with other people and, last but not least, the natural world. This is in fact "*place-based education*" about which P. McInerney, J. Smyth, and B. Down (2011, 5) wrote that it "*creates opportunities for young people to learn about and care for*

ecological and social wellbeing of the communities they inhabit and the need to connect schools with communities as part of a concerted effort to improve student engagement and participation".

The Slovenian Nature Conservation Act of 1999 defined biodiversity conservation measures and a system for the protection of valuable natural features for the purpose of contributing to nature conservation. According to the act, the following management categories were included: national parks (equivalent to *Protected Areas Categories System* (IUCN) - protected area management category II), regional parks (equivalent to IUCN protected area management category V), nature parks (equivalent to IUCN protected area management category V), strict nature reserves (equivalent to IUCN protected area management category Ia), nature reserves (equivalent to IUCN protected area management category IV), and natural monuments (equivalent to IUCN protected area management category III) (IUCN, 2015). Kozjansko Regional Park is one of the oldest and most extensive protected areas in Slovenia. It was established in 1981 as Trebče Memorial Park. The main reason for establishing the park originates from the historical heritage of this area. The mother of the former Yugoslav leader Josip Broz (Tito) was born in the area, and Josip Broz spent part of his childhood there. In 1999, the park was renamed Kozjansko Regional Park. According to the Nature Conservation Act (Zakon o ohranjanju…, 1999), a regional park is an extensive area of ecosystems and landscapes characteristic of the region with large portions of nature in its original state and areas of valuable natural features mixed with parts of nature where human influence is relatively large but in harmony with it. The park covers 206 square kilometers in southeast Slovenia. It has the status of a regional park and is a mix of rich cultural heritage and preserved biodiversity (Ploštajner, Zakonjšek, 2012). The current landscape of the park consists of a picturesque cultural landscape. With their persistence and creative power, people have imprinted typical features of land use in today's park. The forests, riparian vegetation along the waterways, orchards, and exceptional vegetation of high dry grasslands are the essential landscape elements of this protected area (Ploštajner, 2010).

Studies exploring the educational benefits of school visits to nature parks are limited, particularly from the perspective of those shaping the educational experience. Empirical and theoretical evidence support the role of nature in the cognitive, affective, and value-related development of children. S.Nundy (1999) emphasized the relationship between cognitive and affective influences and argued that they are intertwined and provide a bridge to higher-order learning. Most research has been carried out with secondary school students: visiting nature parks, education centers, and natural or urban places. These studies mostly used quantitative evaluation for academic or affective consequences. O. Magntorn and G. Hellden (2007) report that thirteen- and fourteen-year-old students perceive fieldtrips as a significant contribution to learning about ecology because the students can explore, discuss, and link theory to practice. The most effective learning experiences are those that integrate outdoor and reflexive classroom learning (Ballantyne, Packer, 2002; Ballantyne, Packer, 2009; Ballantyne, Anderson, Packer, 2010). I. Ali (2002) states that in the past education experts have narrowly viewed their domain of operation as the "school" with its set curriculum, whereas nature conservation experts have viewed parks as their major concern, having little to do with children at school. He is certain that there is a bridge between the two disciplines, and the tragedy is that it is not being used enough (Ali, 2002). A. Lugg and D. Slattery (2003) examined the educational objectives and roles of teachers and park staff involved in environmental education through outdoor activities offered by national parks in Victoria, Australia. The authors report that teachers often lack the environmental knowledge and skills needed to teach some aspects of the curriculum, thus making the role of the park staff particularly significant in educating teachers as well as students.

Aims. This case study from Slovenia was used to endorse the role of nature protection areas in the school curriculum and the development of conservation education programs. The aim was to study the effectiveness of educational activities for primary school students in Kozjansko Regional Park. The main scopes of the current research were:
- to investigate students' knowledge and attitudes regarding the park's natural and cultural heritage;
- to investigate students' interest in biology and science;
- to investigate the impact of students' interest and sex on their knowledge and attitudes regarding the park's natural and cultural heritage;

- to explore the opinions of teachers and park staff on conservation education outcomes and their collaboration.

Methodology

Sample. The sample consisted of 236 students (114 male, 122 female) eleven to fifteen years old from all six primary schools located in the park. In addition, six science and biology teachers (all women) and two park staff members (both men) were interviewed. All of the students had attended conservation education program activities in the park at least twice in the past two years.

Instruments. Knowledge test and a questionnaire were developed for the purpose of this study, asking students about their knowledge and attitudes regarding the natural and cultural heritage of Kozje Regional Park. To form questions for the knowledge test, educational materials produced by park staff were studied. In addition, semi-structured interviews were conducted with teachers and park staff, and, as a result, conservation education outcomes were identified and measured.

Procedure. The data were collected in 2013 and 2014. Interviews with park staff and teachers were conducted in advance. Students completed a test and a questionnaire in the schools. Students were reassured that the questionnaire was anonymous and that it was not a test, but rather research to explore their attitudes towards natural and cultural heritage. The second author was present during the data-collection process in order to provide a few introductory remarks concerning the purpose of the study.

Data analysis. Descriptive and inferential analysis of the questionnaire results was carried out. The differences between variables were tested using Student's *t*-test and Spearman's rank correlation test.

Results and discussion

Our main goal was to investigate students' knowledge and attitudes regarding the natural and cultural heritage of Kozjansko Regional Park in Slovenia. The participating students were residents of the park and therefore very important for sustaining the traditional interaction of people and nature in the future. Past and present human-nature interaction has produced an area with a distinct character with significant, ecological, biological, cultural, and scenic value. Safeguarding the integrity of this interaction is vital for protecting and sustaining the area and its associated nature conservation and other values (IUCN, 2015).
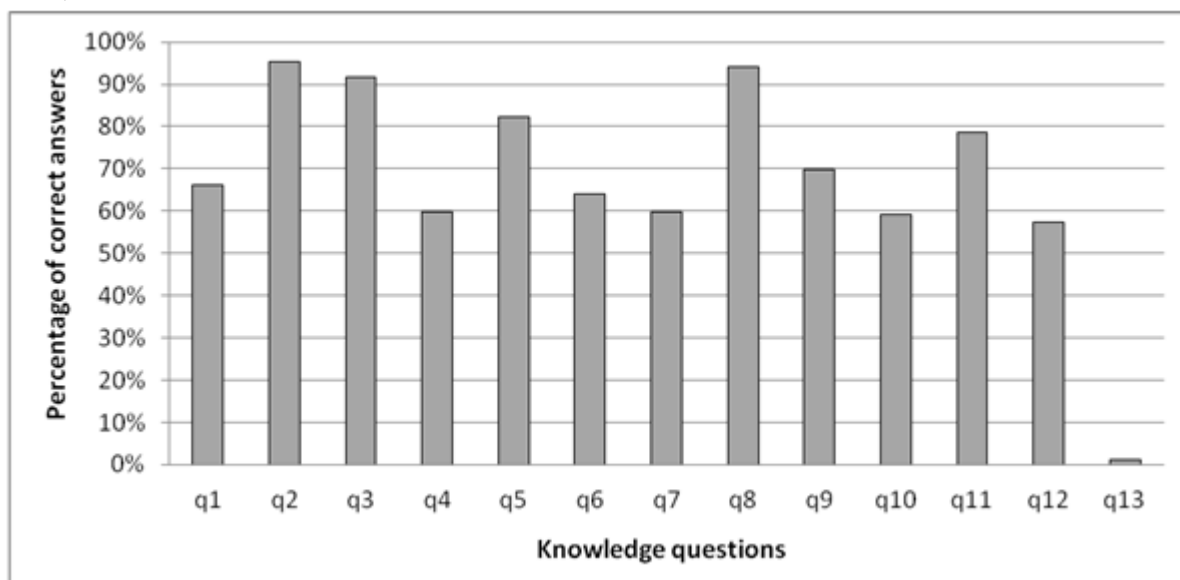
Figure 1. Percentage of correct answers on a knowledge test about natural and cultural heritage.

The results show that students had moderate knowledge about natural and cultural heritage (Figure 1). Students showed very little knowledge when answering Question 13, which asked them to name the woody plant in a photograph. This plant was described in educational materials developed by the park staff. The majority knew the answers to questions that asked students to name the most typical natural

feature (Question 2), the best-known fruit trees (Question 3), and selected plants that do not grow in dry meadows (Question 8). For the other knowledge questions, which asked students about the park's territory (Question 1), protected animal species (Question 11), cavity-nesting birds (Question 4), orchards (Questions 5 and 6), meadow plants (Question 8), deciduous forests (Question 9), linden tree characteristics (Question 10), and tree heritage (Question 12), approximately two out of three students answered correctly.

The majority of students had positive attitudes toward natural and cultural heritage. However, some students showed little interest in biology and science. Each successive TIMSS assessment showed a strong positive relationship between student attitudes toward science and their science achievement. The relationship is bidirectional, with attitudes and achievement mutually influencing each other (Martin, Mullis…, 2012). Our results showed a weak positive correlation between knowledge about and attitudes toward the park's natural and cultural heritage ($\rho = 0.152$, $p = 0.048$) and no significant correlation between student's knowledge about natural and cultural heritage and their interest in biology and science ($\rho = -0.05$, $p = 0.517$). However, there was a moderate correlation between student's attitudes toward natural and cultural heritage and their interest in biology and science ($\rho = 0.419$, $p < 0.001$) (Figure 2). These findings are useful for further development of educational activities in Kozjansko Regional Park and other similar nature protection areas. Students should have regular opportunities to explore their local natural environments because this improves their attitudes toward natural and cultural heritage. Similarly, A. Uitto, K. Juuti, J. Lavonen, and V. Meisalo (2006) found that out-of-school nature experiences were the most important factor that correlated with an interest in biology for Finnish secondary school students.
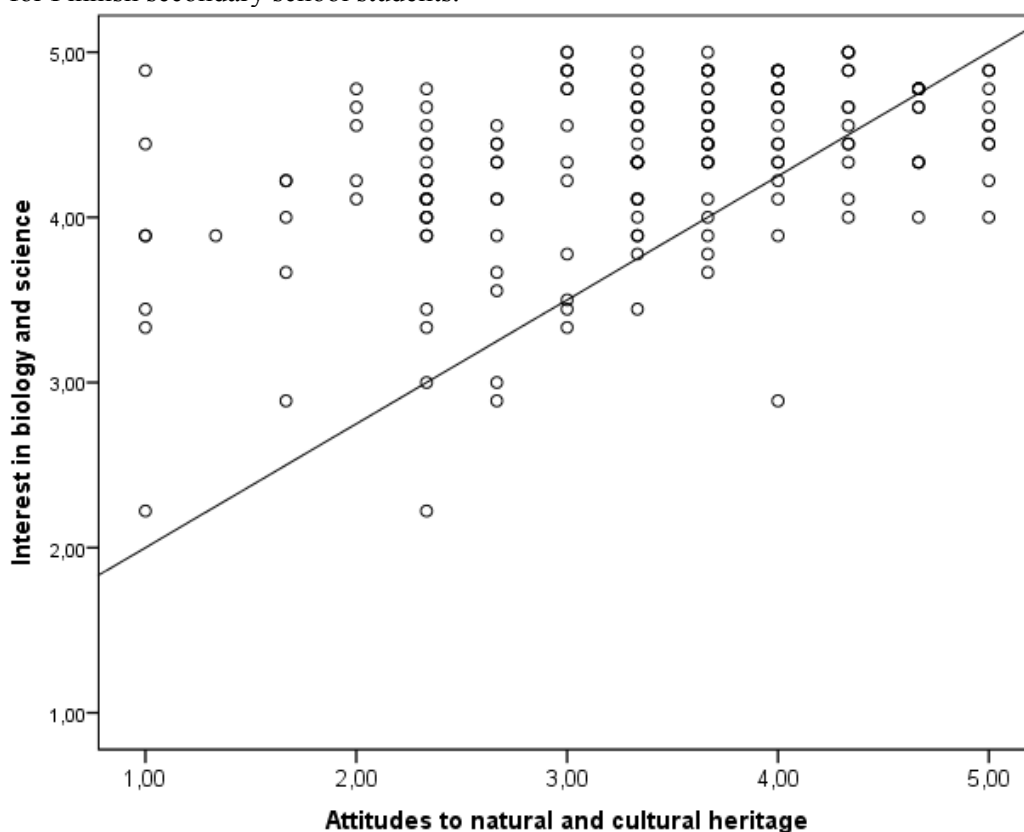
Figure 2. Correlation between students' attitudes toward natural and cultural heritage and interest in biology and education.

The results show a significant correlation between student's knowledge about natural and cultural heritage and their overall academic performance ($\rho = 0.274$, $p < 0.001$) and grades in biology or science subjects ($\rho = 0.216$, $p < 0.001$). There was no significant correlation between student's attitudes toward natural and cultural heritage and their overall academic performance ($\rho = 0.071$, $p = 0.278$) or their grades in biology and science subjects ($\rho = 0.116$, $p = 0.074$). Female students had more positive

attitudes toward natural and cultural heritage ($t = 3.463$, $p < 0.001$). They also showed greater interest in biology and science ($t = 3.479$, $p < 0.001$), which was also reported by P. Prokop, G. Tuncer, and J. Chzda (2007). Sex differences in knowledge were not significant ($t = -0.480$, $p = 0.632$). Similarly, G. Torkar, P. Mohar, T. Gregorc, I. Nekrep, and M. Hönigsfeld Adamič (2010) reported that female students more strongly disagreed with statements expressing opposition to otter conservation than male students.

B.E. Crocker (cited in Lugg, Slattery, 2009) emphasized that a park visit must be a two-way process, carefully planned by the teacher and park staff, and taking into account the needs of the students and the knowledge of the teacher and the park staff. Kozjansko Regional Park staff reported that their main goal was to educate and encourage students regarding nature protection. They offer excursions, summer camps, theme days, workshops, and experiential nature trails for students. They also help teachers mentor promising students in research. The teachers interviewed find collaboration with the park staff important because they share mutual educational goals. They said that cooperation is based on a certain reciprocity. That is to say, the park staff is willing to help offer a conservation education program for students. Teachers include a conservation education program in their school curriculum every year. On the other hand, schools help park staff with various public events (i.e., students singing at the events). The best-known one is in October each year: the Kozje apple festival, at which schools also present their conservation work. The teachers would like to continue collaborating in the future.

Conclusion and implications

The results of this study lead to the following main conclusions. First, the results showed a weak positive correlation between students' knowledge and attitudes regarding the park's natural and cultural heritage. Second, there was no significant correlation between students' knowledge about natural and cultural heritage and their interest in biology and science. There was a moderate correlation between students' attitudes toward natural and cultural heritage and their interest in biology and science. Students' attitudes toward natural and cultural heritage had no correlation with their overall academic performance or grades in biology and science subjects. Female students had more positive attitudes toward natural and cultural heritage and showed more interest in biology and science subjects. Park staff and teachers reported that their main goal was to educate and encourage students regarding nature protection. They find a mutual interest in collaborating and would like to continue doing so in the future.

The network of nature protection areas is not only a sanctuary for rare species and habitats, but also an important recreation area to satisfy the physical, emotional, mental, aesthetic, and spiritual needs of human development. Therefore, we should provide regular opportunities for students to explore their local natural environments, to learn more about natural and cultural heritage, and to be actively involved in preparing and carrying out conservation activities. It is also important that teachers make biology and science education more exciting and meaningful for students to heighten their interest and so that they consequently actively engage in nature conservation.

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Education for Getting Competence

Quality of Teaching in Modern School

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Abstract: Implementation of education policy largely depends on the quality of teacher's work in which teaching takes a significant place. It is not simple to teach. All teachers admit it. However, it is especially important in the present modern school because education actually is the driving force that moves the advance of the society and the growth of national economy. Modern school is characterized by high quality of teacher's teaching and pupils' learning. Effective teaching is the foundation for successful, cooperation–oriented and personalized learning process, which in its turn, ensure better trained specialists, more affluent and safer society and the formation of jointly responsible citizens. Learning in modern school takes place beyond the classroom. The teacher initiates discussions in social media, is open to innovations and application of communication technologies in the teaching/learning process. Many researchers indicate that the current understanding of teaching has to be changed in essence. There is a new perspective on the teaching process in modern school. The teacher in it is creative and entrepreneurial and working in the e-teaching/learning environment stimulates the pupils' individuality and talents. The article reflects some of the theoretical aspects of the teaching process in modern school and analyzes the surveyed teachers' views on teaching strategies that are most frequently used in the teaching practice of modern school.

Key words: quality of teaching, modern school, school education.

Introduction

Education is the driving force that advances the development of economy and social progress. Therefore education policy which is based on the development of modern school has to take an important place in the development of the society. Modern school is characterized by high quality of teachers' teaching and pupils' learning.

Effective teaching is the foundation for successful, cooperation–oriented and personalized learning process, which in its turn, ensures better trained specialists, more affluent and safer society and the formation of jointly responsible citizens. Learning in modern school takes place beyond the classroom. It is based on the philosophy of education that encourages including everyday life problems and their solutions in the content of teaching and learning and to use the new paradigms and teaching/learning resources offered by the development of the technologies. The teacher initiates discussions in social media, is open to innovations and application of communication technologies in the teaching/learning process. Many researchers indicate that the current understanding of teaching has to be changed in essence.

B. O. Smith (Smith, 1969) explains that teaching is the system of purposeful actions that is influenced by two factors:

- factors that cannot be changed by the teacher – the number of pupils in the class, pupils' physical features, etc.;
- factors that the teacher can change by asking questions, discussing ideas, etc.

G. Wells (Wells, 1982) has a similar description of the teaching and points out that it is the system of definite actions in which the teacher motivates, explains, concludes, doubts while collecting data about the pupil's academic achievement and progress.

However, J. S. Farrant (Farrant, 1980) concludes that teaching is a process that makes learning easier. The teacher acts as a catalyst promoting the pupils' learning.

There exists a new perspective on the teaching process in modern school. The teacher in it is creative and entrepreneurial and working in the e-teaching/learning environment stimulates the pupils' individuality and talents.

At the same time the school practice presents also another picture. A. Špona and B. Brigmane (Špona, Brigmane, 2011) in their research have observed that teachers really wish to teach their pupils what they still do not know; however, it turns out that actually teachers do not know pupils' needs for information and knowledge. Pupils have already mastered knowledge and skills from other sources of information that are widely available in the present information space. The teacher in the selection of the teaching strategies is not always ready to respond to the real needs of her pupils.

Education Development Guidelines of Latvia 2014 – 2020 (Izglītības attīstības..., 2013) underline that in 2020 general education will be the one promoting creative thinking and problem solving; integrating the digital teaching/learning resources in the educational process; stimulating the individuality and the development of talents; implemented by young teachers who know well the teaching/learning methods of the 21st century.

The aim of the article is to reflect on some of the theoretical aspects of the teaching process in modern school and the findings of the empirical study (teachers' survey) on the experience of using teaching strategies in the teaching practice of the modern school.

Methodology

Quality of teaching

The teaching process in the school practice takes place in a dramatically new informational environment (social networks, digitalization, plenitude) and is aimed at the future which is impossible for us to describe in detail. The quality of the teaching process is one of the factors that ensures sustainable development of education. It is described by the diversity and appropriateness of the applied teaching/learning approaches, purposeful use of the home tasks, the clarity and purposefulness of the learning content, assessment as part of the teaching, the quality of the teacher-pupil dialogue, care about the pupils (the satisfaction of pupils' emotional, physical and social needs).

The quality of teaching is promoted also by a modifiable and diverse use of the methods in which demonstrations alternate with questions and answers, projects, practical assignments, teaching excursions, inquiries and role plays. This allows maintaining pupils' attention more effectively and due to active participation it also promotes motivation. Boring lectures or tiresome uniform tasks hardly increase the quality of teaching and learning.

The education paradigm selected and accepted by the teacher influences quality of teaching. There are two paradigms – the teacher-centred or the old paradigm and the learner-centred or the new paradigm.

The teacher in the old paradigm is the one who teaches giving the instructions and defining the norms. The teacher's knowledge is transferred to passive learners. The absolute, necessary, and sufficient requirement for teachers in this context is complete mastery of the content. The classic classroom is the teacher lecturing and students listening. The students are silent, passive, and in competition with each other.

In the new paradigm teaching is a personal deal between the pupil and the teacher when the pupil in the cooperation process construes his/her knowledge. The teacher's effort is aimed at developing pupils' competencies and talents (Johnson, Johnson…, 1998).

Two teaching/learning approaches are applied here– inquiry-based learning and cooperative learning.

Inquiry-based learning is a teaching method that focuses on student investigation and hands-on learning. In this method, the teacher's primary role is that of a facilitator, providing guidance and support for students through the learning process. Inquiry-based learning falls under the student-centered approach, in that students play an active and participatory role in their own learning process (Grasha, 1996).

Cooperative learning refers to a method of teaching and classroom management that emphasizes group work and a strong sense of community. This model fosters students' academic and social growth and includes teaching techniques such as "Think-Pair-Share" and reciprocal teaching. Cooperative learning falls under the student-centered approach because learners are placed in responsibility of their learning and development. This method focuses on the belief that students learn best when working with and learning from their peers (Grasha, 1996).

In order to ensure qualitative teaching three intrinsic teaching dimensions are used:
- promotion of the pupils' intellectual development;
- ensurance of a qualitative and modern teaching/learning environment;
- development of the pupils' understanding about the importance of their work (Ayres, Dinham…, 1998).

Quality teaching cannot happen in isolation. Engaging the pupil in the classroom and classroom instruction cannot happen unless there is engagement in the larger context. It only happens when all the surrounding pieces of the larger system are in place. The structure of the school, the school leadership and the community are also essential to quality teaching (Gravson, 2009).

Modern school

Modern school practice cares both for the class equipment with new technologies and modern strategies in the management of the teaching and learning process. Pupils are encouraged to observe the outside world, to analyze what is taking place in different spheres of life (economy, entrepreneurship, social life, etc.).

New generation technologies enter the school. "Microsoft Surface" and "SMART Table" are just two examples of how the combination of the board and school desk will look like in the future. The desk is the computer and the table plate is a huge touch-screen. There pupils find the tasks for the day, present their home tasks, draw figures, do mathematical tasks or write their notes as well as they can play educational games with their classmates. All this is used to ensure qualitative leadership of the teaching and learning process.

The rapid development of technologies makes the teachers be creative and follow the digital lifestyle of their pupils, master new skills that fit the environment of a modern school and allow managing the educational process more effectively. Unfortunately, the initiatives directed to increasing the role of ICT in education often confine themselves with setting up equipment and tools in the classrooms without thinking about how they will affect and change the teaching and learning processes.

Pupils in a modern school more and more often become aware of the importance of the effort they have invested and the importance of their work both in gaining immediate success and ensuring the life career and lifelong education. This is promoted by the digitalization of the school and society, the globalization processes in the society and education, the challenges dictated by the necessity to increase the competitiveness and sustainability not only in the national economy but also in the relation to the life career of every person.

Results and discussion
In order to find out teachers' views about the most frequently used teaching strategies in modern school a survey with the participation of 51 teachers of Latvia was carried out (Figure 1).
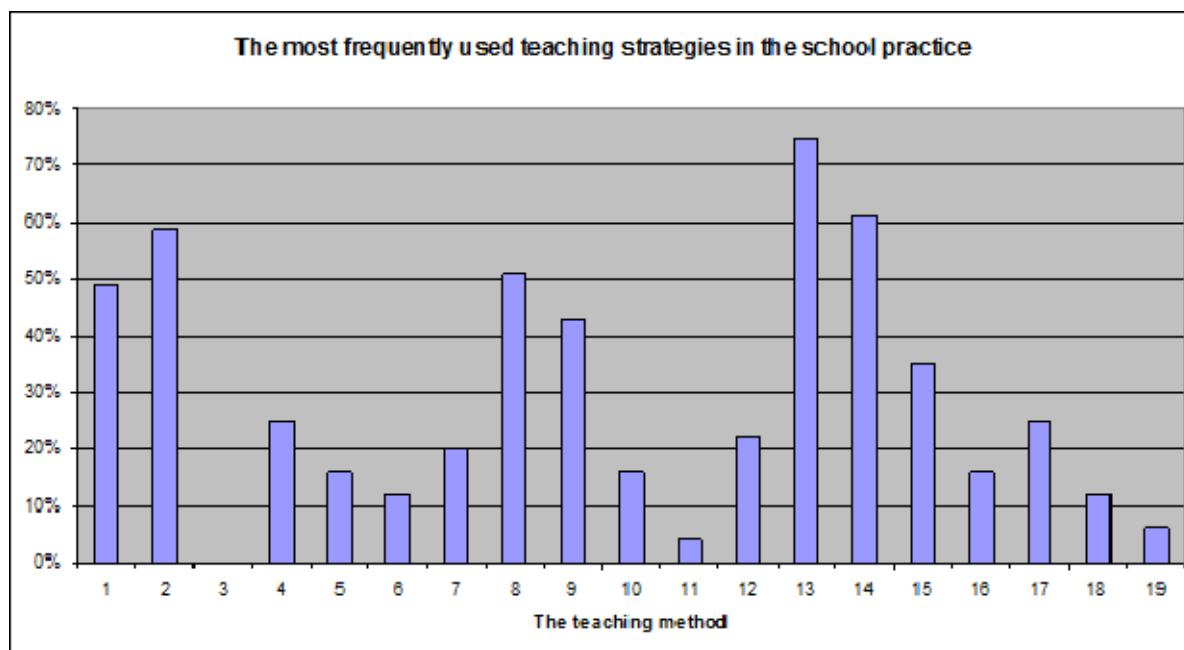
Figure 1. The most frequently used teaching strategies in the school practice, where the teaching methods are:

1. lectures,
2. discussions in the class,
3. discussions in social networks,
4. inquiry as the home task,
5. inquiries in the class,
6. brainstorms,
7. solution of problem,
8. demonstrations,
9. talks in the class,
10. role plays,
11. digital games,
12. active reading,
13. group work,
14. individual independent work,
15. projects,
16. excursions,
17. experiments,
18. dialogue,
19. another answer.

Teachers noted group work (75%), individual independent work (61%) and discussions in the class (59%) as the most frequently used teaching strategies. This proves that the teacher with the help of the teaching methods tries to ensure the cooperation-directed and at the same time personalized teaching process. Pupils interact socially and learn to take the responsibility for their learning and achievement. Group work is a good way how to activate pupils' learning and motivation. Thus also the quality of teaching is higher.

Demonstrations (51%) and lectures (49%) are used a bit less frequently. Demonstrations can be used to provide examples that enhance lectures and to offer effective hands-on, inquiry-based learning opportunities in classes. (Eley, Norton, 2004) However, such frequent use of lectures is alarming. This serves as evidence that there are still teachers who have not fully accepted the new educational paradigm in which the pupil him/herself tries to construe the knowledge, research and conclude. In this case the teacher wants to be the provider of the new knowledge and the pupils have to be the receivers of this knowledge. Yet an interesting lecture can arouse interest and motivate pupils, develop their ability to concentrate and attention, identify and mark the most important information (Hativa, 2000).

At the same time, it is surprising that discussions in the social networks are not used at all and digital games (4%) are used very rarely. Today the new digital generation is attending the school that uses actively the new information technologies   in the everyday life, communicate in different social networks, discuss the problems in Facebook, Twitter and elsewhere, play digital games, search foe diverse information in the internet sites. Many information technology companies have developed excellent digital games that can be applied in the educational process. The teacher although he/she is the „digital immigrant" (Prensky, 2001) has to master urgently the skills to use knowingly and to live in the digital environment, to apply them actively in the teaching/learning process. Thus he/she will be able to

choose those teaching strategies that will be closer to pupils' habits of acquiring information and construing knowledge. This, in its turn, will increase the quality of the teaching process. D. Spanhel (Spanhel, 2006) in his research has observed that teachers is one of those professional groups that despite happenings beyond the school oppose the introduction of the new information technologies in the everyday practice treating the use of these new media as entertainment that is not connected with the educational process.

Teachers mainly apply the new technologies, internet resources in performing administrative duties and not for pedagogical and communicative purposes. The most frequently used internet portals by teachers are the school home page and e-class. The use of these sites is the requirement of the school administration and the teacher's responsibility not the teacher's choice. Teachers do not perceive the internet resources as the educational environment for interactive and modern teaching. This is both a problem and challenge that has to be solved by the modern school because the research has found that only 11% of pupils admit that teachers use information technologies in the educational process (Valdmane, 2014).

Only 35% of teachers marked projects in the survey as a teaching strategy and 25% - inquiries at home while 16% of teachers indicated inquiries in the class. It serves as evidence that these teaching strategies are used rather seldom although projects and inquiries in the class and at home are a successful means for construing pupils' knowledge and motivation, for analyzing the current phenomena and processes of different spheres of life of the surrounding world.

The data of Estonia in TALIS 2013 study can be mentioned for the comparison; they show that they use the constructivism approach in their teaching in which active learning of pupils takes place and they use less such methods as individual independent work and projects (Geske, Grīnfelds…, 2013). Teachers in Latvia, in their turn, use individual independent work as a teaching strategy rather frequently. As regards the use of projects then the situation is similar.

The dialogue as the most frequently teaching strategy is mentioned only by 12% of teachers. This has undeservedly low assessment and thus it is comparatively rarely used in the class practice. One of the reasons may be that a dialogue always has some spontaneity possibility when it can take another direction that the teacher had planned in advance. The teacher in such a case must be flexible. P. Freire (Freire, 1998) acknowledges that a dialogue is one of the key strategies how to construe knowledge. Thus the class and school become the place in which the information is studied and analyzed. Besides the dialogue develops several character features, e.g., the courage to express oneself, the tolerance to different opinions, belief in one's strengths, etc.

Conclusions

Teaching in modern school does not take place entirely in the classroom. It is oriented to the support for promoting the pupil's learning process and goes beyond the classroom using the development of information technologies.

The modern pupil represents the digital generation. Therefore the teaching strategies have to supplemented with those activities that pupils use in their everyday life – discussions in social networks, digital games, etc.

The surveying of teachers allows concluding that such teaching strategies which include pupils' everyday habits to communicate in social networks, to play digital games, to seek information in the internet, etc. in the educational process are used rarely or not at all in the school practice. This needs more extended research on the reasons for such a situation and the possible solutions. One of the reasons could be that teachers do not use internet resources, digital tools as freely as their pupils and therefore they seldom choose teaching strategies connected with their application.

Still the positive feature can be the fact that the most frequently used teaching strategies (group work, discussions in the class) are directed towards the satisfaction of pupils' social needs, the construction of knowledge (including also the individual independent work), consolidation of the cooperation skills, the formation of those pupils' features that will promote sustainable development of the society and the competitiveness of each pupil.

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Purposefulness and Time Management Components of Self-directed Studies at Latvia University of Agriculture

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Abstract: Students' self-assessment of their learning is an essential and recognized part of the study process that helps to improve their self-directed studies. The study relates to the components of self-directed studies and particularly to purposefulness of studies and time management, e.g. the students' capability to plan time in favour with study requirements. The aim of the study was to determine the components of self-directed studies and time management, and to analyse the purposefulness of studies and time management at Latvia University of Agriculture. The theoretical study was focused on the analysis of the components of time management and self-directed learning (SDL) using the approach of transformative learning. The method of questionnaire was used to investigate the students' self-assessment of their self-directed studies focusing on purposefulness to reach better learning outcomes, tutors' support and time management in the empirical study. The results of the study were obtained from 294 first-year and 218 third-year students of agricultural engineering, forestry and forest engineering, food technology, agriculture, veterinary medicine, construction, information technologies and economics fields of Latvia University of Agriculture (LLU). There were compared the data and their distribution got from the first and third year students using p value (p≤α=0,05) as a criterion. Therefore the questionnaire results serve as a means of revision of the students' and lecturers' understanding of the quality of studies considering the influence of time management and the importance of tutors' help as well. The obtained results is one of the backgrounds that determine further investigations and improvements of study process organization paying a serious attention to time management skills promotion involving three groups: students, their self-government and academic staff. It means that the mechanism of helping how to plan and use the time in favour of studies should be worked out and implemented.

Keywords: self-directed university studies, purposefulness of studies, time management.

Introduction

Purposefully managed self-directed university studies are highly important because they put a stress on each student's higher responsibility, initiative, motivation, independence, collaboration and self-assessment. Time management is a crucial capability in order to cope with a lot of requirements, tasks and aims for each university student.

One of the author's recent studies in relation to self-directed studies was the investigation of competences as the main outcome of SDL and internal/external factors having an impact on SDL as well as analysed selected indicators' results of SDL at Latvia University of Agriculture (Briede, 2015). The study results showed that not all of students were ready for successfully guided self-directed studies because getting of higher education is very popular among young people but not all of them are motivated for deep and research-based studies.

Skilful time management is one of the ways how to promote the students' learning. Therefore the students should be able to assess how much time is necessary to cope with the task successfully. The students underestimate their ability and fail often because of the lack of time. The study comprises investigations of the components of self-directed studies and time management as one of SDL components. The study shows how students assess their time management by themselves and how they comment it. The empirical data discover relation between the students' capability of time management and purposefulness to reach better learning outcomes as one of the relevant components of self-directed studies as well as necessity of tutors at Latvia University of Agriculture.

The term „self-directed learning" (SDL) is analysed widely in scientific texts of adult problems and development. The term is used in adult education and students' learning also refers to the results of SDL investigations.

SDL is considered in the study as a process where each individual actively keeps cognition, emotions, motivation and activities which are systematically oriented towards reaching of personal goals.

The main methods of the study were the theoretical analysis of self-directed studies including time management as a particular component, and the questionnaire of the students of LLU.

The aim of the study was to determine the components of self-directed studies and time management, and to analyse the purposefulness of studies and time management at Latvia University of Agriculture.

The objectives of the study: to analyse the term of self-directed studies and its components; to analyse the term of time management and its components; to questionnaire students about their purposefulness to reach better learning outcomes and time management towards studies and assess coherences between them; to ask students about the necessity of tutors in order to get more information on their motives and problems.

Methodology

The theoretical basis of the study was:
- the transformative learning as experiental learning by means of critical reflection through rational discourse by J. Mezirow (1991, 2000);
- systemic approach to self-directed learning by K Saks and A. Leijen (2014); B. J. Zimmerman and D.H. Schunk (2011);
- time perspective in micro, meco and macrosystem by U. Bronfenbrenner (2000, 2005, 2006);
- cognitions of time perspective by P. G. Zimbardo and J.N. Boyd (2008).

Transformative learning theory developed by J. Mezirow (1991, 2000) describes diversely how learners use their experience constructing, discussing and assessing meaning. Critical reflection of the experience is a crucial component of transformative learning. It empowers changes of understanding of the self, beliefs, attitude and emotions. Rational discourse is a means which should be used in the process of transformative learning. Therefore the meaning schemes are transformed and the learners develop their thinking skills integrating new cognitions in their experience.

Critical transformation of experience in the process of development of new professionals is a feature that they think about learning outcomes and attitude, change them and become autonomous learners. Therefore critical reflection through rational discourse is an integral component in self-directed learning.

The term „self-directed learning" (SDL) refers to adult education and its indicators are more appropriate to university studies. It „originates from adult education; practiced mainly outside traditional school environment; involves designing learning environment; involves planning learning trajectory; broader macro-level construct" (Saks, Leijen, 2014, 193).

The term „self-regulated learning" (SRL) is one of self-regulation domains and is used in investigations related to all groups of age.

SDL and SRL have the following common features: „1. both are seen in two dimensions a) external/process/event; b) internal/personality/aptitude; 2. both have four key - phases: defining tasks - setting goals and planning - enacting strategies - monitoring and reflecting; 3. active participation; 4. goal - directed behaviour; 5. metacognition; 6. intrinsic motivation" (Saks, Leijen, 2014, 193).

SRL covers three mutually overlapping fields: cognitive and metacognitive, social and motivation and behavioural and health (Zimmerman, Schunk, 2011).

The first field involves cognitive and metacognitive critical and self-reflection abilities (to evaluate one's experience and judge critically on problems and events, and take appropriate decisions) (Bogo, Regher, 2006) as well as know and understand – How? It means that the student is able to organize and evaluate success of studies. As regards labour market a person is able to adapt to changing demands flexibly and solve them professionally: to state and manage job tasks in various situations, find solutions and transitions in problems and set down decisions based on real analysis (Kniel, 2009, 58).

The second field focuses on social processes and motivation. Students display their values and outer impacts on their decisions and behaviour. „Attitude" is a key word of the field.

The third field covers behavioural processes to solve health and other psychical problems in order to avoid from inadequate self-esteem or self-punishing, or self-pitying.

It means that students' SDL components have to comprise attitude, cognition, metacognition and critical reflection of their experience. The SDL components manifest themselves in time and it has a lot of limitations, and aspects of its optimal usage in the process of studies. Therefore the time is so valuable and important, and has to be selected as one of SDL components.

Time management is closely related to humans dreams, hopes, goals and wish to achieve them (Lehmkuhl, Lamping, 1993; Zimbardo, Boyd, 2008). According to U.Bronfenbrenner et al. (2000, 2005, 2006) different time periods affect how the proximal process takes place. The time periods are the following: microtime: "Continutity vs. discontinuity within ongoing episodes of proximal processes; mesotime: frequentcy of these episodes across days and weeks;macrotime: changing expectations and events in the larger society (within and across generations). The power, form, content, and direction of the proximal processes effecting development vary systematically as a joint function of the characteristics of the person, environment, and changes over time". (Brofenbrenner, 2005, 3-15; Brofenbrenner, Evans, 2000, 115-125; Brofenbrenner, Morris, 2006).

P.G. Zimbardo and J.N. Boyd (2008) analyse various series of paradoxes of time from the perspective of its effect on our lives. Time perspective influences our attitude and actions through our personal experience and culture.

The theoretical construct of the empirical study instrument were M. Siniscalco and N. Auriat (2005) guidelines for writing questions. They stress keeping of the vocabulary simple and the questions short, avoiding of: double-barrelled, hypothetical questions and double negatives, overtaxing of the respondent's memory and overlapping response categories.

L. Cohen, L. Manion and K. Morrison mention that questionnaires should encourage respondents to co-operate and they have to be easy and attractive. They also comment on Moser and Calton's conclusion that central tasks in the questionnaires editing are completeness, accuracy and uniformity (Cohen, Manion, Morrison, 2011). The questionnaire touched the problems important for students and promoted deeper reflection on attitude and puposefulness towards learning, study environment, and desire to be an innovative professional.

There were compared the data and their distribution got from the first and third year students using p value (p≤α=0,05) as a criterion. Calculations were done by interactive calculation tool (Preacher, 2001).

Empirical study had beeen carried out in May and December 2015. The method of questionnaire to investigate students' self-evaluation on the development of first and third year students' self-directed learning had been carried out. There were included dichotomic choice and ranged answers in the questionnaire (Kristapsone, 2008). The dichotomic answer choices were about the necessity of tutors but in ranged answers students marked high (h), medium (m) and low (l) level of time management and purposefulness of reaching better outcomes of learning. The obtained results could be used in the revision of planned results of study courses and implementation of methods and content promoting better reaching of learning outcomes.

Results and discussion

Getting of competence as the highest learning outcome is a process which should be promoted by self-directed learning (SDL). It is a process where each individual actively keeps cognition, emotions, motivation and activities which are systematically oriented towards reaching of personal goals. SDL is a precondition for innovative and responsible activity in a labour market. Students need to be aware of their SDL skills and understand how to improve them. Considering theoretical investigations of SDL phases and fields it is possible to determine the following SDL components of university studies:

- responsibility and purposefulness (setting of goals and planning) towards studies and chosen professional field;
- active participation in the study process and societal activities;
- continuous cognition and metacognition;
- critical reflection of experience (particularly of learning outcomes and behaviours);

- time management.

Time is a crucial phenomenon of our space of life and it directly relates to our choices and will-power to achieve our goals and to complete tasks.

The following features of the student's time management in the study process were substantiated in the result of the theoretical study:
- ability to be aware of one's time perspective, its development and significance in life;
- understanding of the impact of micro-, meso- and macrotime periods on a person and life episodes, and events;
- clear understanding of needs, goals and tasks;
- ability to evaluate time resources necessary for achieving goals and completing tasks;
- ability to organize self-, time and environment;
- ability to determine prior tasks and concentrate on them.

512 students (294 – first year and 218 – third year) of Latvia university of Agriculture from the fields of agricultural engineering, forestry and forest engineering, food technology, agriculture, veterinary medicine, construction, information technologies and economics answered three questions about purposefulness to reach better learning outcomes and time-management (Table 1), and the fourth question was about the necessity of tutors. The survey had been carried out in eight faculties in May and December 2015.

Table 1

Students' self-assessment of self-directed learning

Indicator	Respondents		Self-assessment			P value
	Year	Totally	h	m	l	
Studies with the purpose to reach as much as possible better learning outcomes	1	294	182	112	0	0.000
	3	218	102	102	14	
Ability to plan time in order to meet study requirements	1	294	76	162	56	0.809
	3	218	61	114	43	
Ability to consider terms of the study process	1	294	83	163	48	0.086
	3	218	64	103	51	

Significant difference among the first and third year students' self-assessment indicators is determined by *chi-square test*. Self-assessment differences in studies with the purpose to reach as much as possible better learning outcomes are obvious The first-year students' self-assessment results are higher than third year students' results.

The significance difference of other indicators is not statistically significant (p > 0.000). The differences is only in ability to consider terms of the study process (p = 0.086 < 0.100).

The first and third year students' self-assessment of purposefulness in relation to time management is reflected in the Table 2 and Table 3. The differences between indicators are significant and actually there is not a coherence between time management and purposefulness to reach as much as possible better study outcomes.

Data in Table 2 and Table 3 show students recognition of their time management level, and only 83/76 first year students from 294, and 64/61 third year students from 218 are on high level.

Students recognize the reasons of their time management problems in their comments, e.g. do not plan, not able to harmonize time and tasks, laziness, other priorities, etc. It means that the students need to get systemic knowledge about time management skills and their importance. It could be useful to investigate the students' actual learning outcomes and time management skills in more detailed way. It is important to find coherences among indicators of the students' learning process and find ways how to improve their learning outcomes particularly in a situation when the students recognize that their studies are purposeful.

First-year students' self-assessment of purposefulness in relation to time management

Indicator	Respondents		Self-assessment			P value
	Year	Totally	h	m	l	
Studies with the purpose to reach as much as possible better learning outcomes	1	294	182	112	0	0.00
Ability to consider study terms			83	163	48	
Studies with the purpose to reach as much as possible better learning outcomes	1	294	182	112	0	0.00
Ability to plan time in order to meet study requirements			76	162	56	

Third year students' self-assessment of of purposefulness in relation to time management

Indicator	Respondents		Self-assessment			P value
	Year	Totally	h	m	l	
Studies with the purpose to reach as much as possible better learning outcomes	3	218	102	102	14	0.000
Ability to consider study terms			64	103	51	
Studies with the purpose to reach as much as possible better learning outcomes	3	218	102	102	14	0.000
Ability to plan time in order to meet study requirements			61	114	43	

The fourth question was about the necessity of tutors. 35% of 294 first year students and 25% of 218 third year students gave a positive answer. The main reason why the students prefer tutors is a necessity for help in exat courses (physics, chemistry, mathematics). All the students stress that brief and precise explanations of the problem and how to solve it are crucial because then it is easier to percieve and understand. The students also recognize that they get confused in information and they need immediate help how to cope with course requirements and terms.

The first year students emphasize that they have problems in understanding of the study process and the university system. They assess many courses as quite complicated. The first year students remark that seniour students-buddies could be a very good solution for them but they also wish an individual help and friendly attitude from teachers. They stress that they have a lot questions about everyday problems and study process organization and run (planning of time, to get to know bits about studies, training of memory etc.).

The third year students stress importance of the change of experience with teachers and seniour students as well as they say that getting of the information about practice at companies could be very useful in further studies and for future plans. They recognize that meetings with employers could help to judge and take decisions about their practice and job choices. The students also recognize the importance of motivation and their opinion is that tutors could be good persons which stimulate learning motivation and give advice in writing Bachelor theses.

Further usage of the components of SDL in investigation of university students' learning means working out of detailed indicators of each component, and continuing regular questionnaires of students. It means also improvements of the study process quality considering the SDL components and indicators and paying also a serious attention to time management skills.

Time management depends how really we are aware of our wishes and do we have enough will-power to implement them in appropriate activities and overcome procrastination as well as control ourselves and handle criticism. Time management includes also the ability of solving of spatial problems (keeping things in order, etc.) and organization of physical environment (Lehmkuhl, Lamping, 1993).

Business environment pays crucial attention to time management skills preparing handbooks, organizing training courses and pointing to poor time management indicators in their home pages and sources (11 Symptoms of poor..., 2015).

According the Descriptors defining levels in the European Qualification Framework (EQF) (Descriptors defining..., 2015) the learning outcomes are distributed into knowledge, skills and competence. SDL orientation towards learning outcomes promotes more detailed understanding of their components and content.

Conclusions

- Students' self-assessment of their learning should be promoted regularly by questionnaires and results used to improve SDL in consultations by tutors and buddies. Therefore the questionnaire results serve as a means of revision of the students' and lecturers' understanding of the quality of studies. The obtained results is one of the backgrounds that determine further investigations and improvements of study process organization paying a serious attention to time management skills promotion in three groups: students, their self-government and academic staff. It means that the mechanism of helping how to plan and use the time in favour of studies should be worked out and implemented.
- Continuous development and support of SDL components promote the quality of learning and understanding of the individual's human capital opportunities in the frame of competence oriented systemic studies. Strengthening of coherences among components and deeper study of their content and results implementation in practice is one of the ways how to make outcomes-based self-directed studies more effective. Therefore self-directed studies can be analysed as an instrument of increasing students' learning success.

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The Theoretical Nature and Practical Necessity of Pedagogical Supervision

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Abstract: Nowadays the teacher's professional activity is the basis of the quality of Education in Latvia and in the world. The European Union views the role of teachers and their lifelong learning and career development as key priorities. Beside the high demands that are set for teachers, they have been facing numerous problems and challenges in their professional activities. One of the most serious problems that ask for immediate solution is the on-going gap between the teacher's theoretical basis and praxis – the "real" classroom teaching situation. This problem is also described as "the Achilles heel of teacher education". Teachers gain theoretical knowledge on treatment of different situations in professional development courses. However they lack skills (competencies) to put the acquired knowledge into practice. This situation causes the main classroom problems teachers are facing – the discipline problems, the low level of students' intrinsic motivation and communication problems with the students' parents. The issues mentioned above require new supporting forms for the teachers' professional development that not only improve their professional skills but also *full development* of the human *personality*. The results of the research show that the teachers need regular and deep support that would offer a transformative learning environment characterised by reflection and self-evaluation. Pedagogical supervision is reflective by nature and is one of the support forms stimulating development of reflexive skills and can help teachers to solve problems in their professional work. The aim of this article is to study the theoretical nature and the practical necessity of the Pedagogical supervision.

Key words: pedagogical supervision, pedagogical activities, professional development, school education.

Introduction

Guidelines for strategies of sustainable development of Latvia by 2030 and development of education 2014 – 2020 indicate a people-centred development model the tool of realising which would be select and accessible life-long education. The European Union considers educators to be the main factor in fostering development of the system of education and achieving the goals of education. The role of educators, their life-long education and career development is a priority in the EU (Common European Principles…, 2005).

This framework demands serious assessment of support given to continuous professional development of teachers. Teachers in Latvia have a wide choice of opportunities for professional development today. Nevertheless, it appears that educators still encounter many problems in their pedagogical work. The research of DNB Baltic Barometer "Lack of discipline in Latvian schools, teachers have to be stricter" studied the most urgent problems in Latvian schools in 2014. Discipline problems in school (57%) and shortage of teachers as well as their small salaries (46%) were presented as the essential problems (Pētījums: Latvijas…, 2014).

The research *Teachers' work-related stress* of The European Trade Union Committee for Education (ETUCE) discloses that teachers have the highest work- related stress level in comparison with other professions, which increasingly affect their health and wellbeing. In its turn work-related stress level in Baltic schools is one of the highest in Europe. Educators surveyed in the ETUCE research admit that 49% of teachers are on the verge of burning out (Teachers' work-related…, 2014).

The broadening of the gap between the theoretical basis of teacher education and the practice in school is also mentioned as a serious problem by Teacher Education Policy in Europe Network (TEPE) (Adubra, 2014).

The above mentioned problems show that besides the existing support measures like various professional development courses there is a necessity for new forms of assistance that would help

teachers to successfully join theoretical concepts with their practical application, to overcome contradictions between the demands of current laws and regulations and the frameworks of the new paradigm of education (Blūma, 2010), to create a social dialogue between the sides involved in education to search and find the ways of acquiring the knowledge.

Accordingly, on the one side there is a necessity for continuous development of teachers and on the other side there should be effective good quality and variegated support forms for professional and personal growth of teachers since it is the possibility for growth that is the main stimulus that cultivates positive motivation for professional work.

In discussions and publications concerning professional development of employees of different spheres more and more frequently we encounter the term supervision. Currently in Latvia this form of support for educators is not a common phenomenon, yet it is effectively applied by psychologists, psychotherapists and social workers.

Therefore the aim of the research under discussion is to establish the particularity of professional needs of teachers of comprehensive schools and to investigate the possibilities offered by supervision as transformative educative environment to professional development of teachers.

The aim of the article is to study the theoretical nature and the practical necessity of Pedagogical Supervision.

Research questions:
1. What is the character of professional needs of teachers?
2. What is the theoretical nature and practical significance of the pedagogical supervision?

Methodology

The theoretical basis of the research consists of analysis of literature about contemporary educational process (Mezirow, 1991; Barr, Tagg**,** 1995; Rutka, 2009; Andersone, 2009; Blūma, 2010; Burceva, 2010; Davidova, 2010; Kalniņa, 2010; Lanka, 2010; Mackēviča, 2010; Darling-Hammond, 2010; Ducommun, 2010; Briška 2011; Lāce, 2014; Mardesic, 2014; Latkovska, 2015, and theoretical nature of pedagogical supervision and its practical facilities in the professional development of teachers (Proctor, 1984; Kadushin, Harkness 2014; Carroll, 2011; Creaner, 2011; Āboltiņa, 2012; Hawkins, Shohet, 2012; Truskovska, 2013).

The empirical basis of the research comprises results obtained from 71 respondents. The research has been done in two Secondary schools in Latvia. Research consists of quantitative and qualitative methods. Methods include analysis of scientific literature and resources, questionnaire for teachers and in-depth interview.

The method of data analysis –Frequency analysis for aggregating results of questionnaire, and correlation analysis for clarifying connection of work experience with different pedagogical problems and peculiarities (Pearson's Correlation Coefficient).

Results and discussion

The term *supervision* is used and explained in many ways (Pertoft, Larsen, 1991; Holmberg, 2001; Inskipp, Proctor, 2001; Wilmot, 2011; Āboltiņa, 2012; Truskovska, 2013), however, there is no essential contradiction in the explanations, yet there are conceptions for strengthening common ideas of the notion instead. In scientific literature supervision is defined as a process of alteration (Pertoft, Larsen, 1991) for development supervision of *participants' competences* where the learning situation or learning enviroment promotes the professionalism of participants and reduces professional uncertainty (Holmberg, 2001). In the learning process supervision is actualized development of emotional competence and empathy skills as well as development of emotional intelligence of the whole person (Āboltiņa, 2012). Supervision is a reflective process (Inskipp, Proctor, 2001), space and possibility for deep conversation and creative thinking (Wilmot, 2011, 69), that helps to recover self-confidence and promotes personal identity transformation into professional identity (Truskovska, 2013).

Almost in all definitions of supervision such words prevail as *learning, learning environment, learning situation, dynamic learning, learning environment,* etc. It means that supervision has always been connected to learning and development. K. Fielden (2008) has noted that scientific literature does not state explicitly what sort of learning supervision supports and facilitates. Transformational learning in supervision is mentioned as the latest kind of learning in supervision (Mezirow, 1991; Carroll, 2010; Wilmot, 2011; Adamson, 2011; Creaner, 2011). According to M. Carrol (2010, 17) transformational learning is „ the deepest form of learning" in supervision, because it accommodates both personal and professional learning. Transformation can occur at a cognitive level when perceptions are changed through deep learning, critical reflection and when change in perspective occurs. It can also occur at an emotional level, a „metanoia", a change of heart and leads to a change the way we interact in the world and supervision relationship. All human nature is present in supervision relationship (Creaner, 2011, 150), transformational learning involves body, mind, soul and feelings and it is work for a lifetime (Adamson, 2011, 91-100).

M. Creaner (2011) refers to J. Mezirow (1991) and R. Boyd (1991) and describes transformational learning as: a cognitive process that involves imagination, intuition, dreams, myths and metaphors (1); intensive and personal process (2); a reflection about past, present for future, who I am today based on all my experiences to date and who I want to become (3); a passionate move towards endless possibilities with a compassionate acceptance of limitations (4). J Wilmot (2011) points at the reflective nature of the supervision and possibility to look on things and processes, accepting the present situation not as bad or good but rather as a new opportunity for new development. M. Carroll (2011) describes reflection as purposeful focusing on thoughts, feelings, sensations and behaviour in order to make meaning from those fragments of experience. The outcome of this reflection is to create a new understanding which in turn may lead to increasing choice, making changes or reducing confusion. T. Dinkelman (2009) stresses that knowledge and skills without reflective practise don't contribute any professional benefit therefore reflective practise is considered as the most important concept in professional development of teachers (Rutka, Andersone, 2012) so a reflective approach to action has been viewed as one of the main activities in the development of every professional (Killeavy, Moloney, 2010).

Therefore supervision as a *reflective process* (Inskipp, Proctor, 2001), as *reflective forum* (Āboltiņa, 2012) offers the save environment**,** supportive and transformational learning space (Truskovska, 2013), where solving problems occurs by learning from experience and realisation of a regular interpersonal exchange of knowledge and supporting development of professional skills and empathy in the mutual reflective process (Āboltiņa, 2012).

The empirical part of the research analyses teachers' viewpoint and reflections on problems they face in the pedagogical process and what kind of support is required for their professional development.

The highest necessity for educators is the need to develop professional zeal. Since one of the greatest problems today is encouragement of student motivation, the said necessity is self-evident, because a student can only be motivated by a zealous and motivated teacher. This leads to a need for such form of support that would motivate teachers, as it is only by liberating them from routine one can develop and foster their professional enthusiasm. Teachers also point at overload, tiredness, and professional burnout symptoms that manifest themselves as finding fault with other people like students, parents, management, local council and the whole society.

The least necessary point marked by teachers turns out to be necessity for reflection on their pedagogical work. Summarising the problems indicated by teachers one chiefly observes three problems:
- lack of student motivation 27%;
- problems with discipline 24%;
- problems connected with parents of students 22%.

10% of educators point out burnout symptoms. 7% present time shortage as a problem implying that there is no time to contemplate end evaluate work experience.

The results of research in the particular school correspond to the overall situation in the country, where the main problems are those of student discipline and low motivation as well as communication difficulties with parents and colleagues.

Empirical analysis reveals the complexity of the situation of educators despite the awareness of mission and job satisfaction granted by association with students. On the one hand the educator faces very high demands from society and on the other hand the educator meets lack of uniform demands and values in school and among parents, the low esteem of teacher's profession and low student motivation, problems of discipline, which are related to disorders of learning and behaviour and integration in the study process.

An in-depth interview with the school director discloses an increasing number of situations with incomprehension and confusion as to the right way of action in the case. Also, teachers' questionnaires reveal failing confidence in efficiency of applied methods as well as a high necessity for acquisition of effective methods of student motivation. This indicates that methods successfully used earlier do not work anymore.

This has been asserted by the survey results, where teachers consider reflection to be unimportant in their work, even though it is recognised that forming a reflexive approach is to be regarded as one of the main activities in every professional's development. Reflection in contemporary education process is acknowledged as the main concept in preparing teachers and their professional development. Knowledge and experience alone without reflection present no professional gain at all; therefore formation of reflexive approach to operation is to be considered one of the main activities in the development of every professional (Killeavy, Moloney, 2010, 1070).

Therefore teachers need forms of assistance that would develop and foster their self-reflection and contemplation of their pedagogical work forming their "ability to step back and pose hard questions about: why are things done this way? How could I do it differently?" (Carroll, 2011, 18).

As a consequence there is a topical and urgent task of constructing technologies for development of reflective skills and professional competency of teachers. Analysis of professional literature led to a conclusion that supervision, which is reflective by nature, is one of the support forms stimulating development of reflexive skills and can help educators to solve problems in their professional work, as supervision tends to look for sources of problems through reflection and self-evaluation (Rutka, 2009).

Supervision is a significant mechanism in teachers' professional development and it has several functions. A. Kadushin (Kadushin, Harkness, 2014) declares three main functions of social work supervision educative, supportive and managerial. Hawkin and Smith (2006) writing about coaching supervision describe developmental, recoursing and qualitative as the three main functions. B. Proctor regarding supervision of counselling uses the terms formative, restorative and normative. A. Kadushin's (Kadushin, Harkness, 2014) function focus on the role of the supervisor and B. Proctor's (1988) on the supervisee benefit but P. Hawkins and N. Smith (Hawkins, Smith, 2006) focus on the process in which both supervisor and supervisee are engaged.

Knowledge of classification of functions of supervision is necessary for clearness and understanding the duties of a supervisor, for tackling problems and determining the concept of the formation of a joint workspace (Āboltiņa, 2012).

Supportive function. The main question of the supportive supervision is the employee's moral and his satisfaction at work. The basic task of supportive supervision is practical and psychological support to employee by developing his ability to manage stress efficiently. The supportive function is the sustaining form of supporting action. And it is suitable for competent and qualified employees as well as for young employees.

Managerial function. The basic task of managerial supervision is improvement and maintenance of professional standards and co-operation with the administration. This function helps to notice mistakes, to uncover principal stereotypes and prejudices, it identifies weak points and oversees adherence to ethic principles in professional work (Āboltiņa, 2012).

Educational function. The main task of educative supervision is to ensure personal and professional development of an employee to the extent of their perfect fulfilment. The primary focus of educational function is to provide safe environment where employee can obtain necessary knowledge, skills and experience through encouraging reflection and accurate explanation of tasks and specifications of their

work (Truskovska, 2013). As professional development is an obligatory demand in all professional spheres the role of educational function of supervision is highly significant in maintaining professional standards.

Table 1

Statement of reasons of necessity of supervision as a support form attested by theoretical and empirical research

Necessities and problems of the teachers	Supply of pedagogical supervision	Functions of Supervision
Promotion of teachers' professional zeal.	Supervision offers time, space and possibilities for the teachers to rise above their daily routine and see new solutions to problems (Creaner, 2011).	Developmental (Hawkins, Smith, 2006)
Development of overall intelligence of teachers.	Transformational learning in supervision is „the deepest form of learning" in supervision, because it accommodates both personal and professional learning (Caroll, 2010). Transformational learning involves body, mind, soul and feelings and it is work for a lifetime (Adamson, 2011).	Developmental (Hawkins, Smith, 2006)
Lack of student motivation.	Supervision is a reflective process (Inskipp, Proctor, 2001), space and possibility for deep conversation and creative thinking (Wilmot, 2011).	Educational (Kadushin, Harkness, 2014)
Problems with student discipline. Problems connected with students' parents.	In the learning process of supervision development of emotional competence and empathy skills as well as development of emotional intelligence of the whole person are actualized (Āboltiņa, 2012).	Developmental (Hawkins, Smith, 2006)
Symptoms of professional burnout.	Supervision helps to notice symptoms of professional burnout and prevent them (Āboltiņa, 2012).	Supportive (Kadushin, Harkness, 2014)
Lack of time to think over the teaching praxis.	Supervision is essentially is a space and time to foster transformative learning that is critical reflection about teaching praxis (Creaner, 2011). Supervisees learn from practice through reflection and become reflective practitioners (Carroll, 2011).	Educational (Kadushin, Harkness, 2014)
An increasing number of situations with incomprehension and confusion as to the right way of action in the case.	The learning situation or learning environment in Supervision promotes professionalism of participants and reduces professional uncertainty (Holmberg, 2001).	Educational (Kadushin, Harkness, 2014)
Teachers consider reflection to be unimportant in their work.	Reflection is tied closely to mindfulness, paying attention and being perceptive and becomes a rational and emotional focus that delves deeply into all aspects of our work (Carroll, 2011).	Educational (Kadushin, Harkness, 2014)

The Table 1 shows the main necessities and problems of the teachers in their professional practice and possibilities for problem solution offered by developmental, supportive and educational functions of Supervision.

Conclusions

The conjunctive key words in various definitions of supervision are *learning, reflection* and *development*. Supervision attracts attention to daily activities and fosters development of an employee's professional and emotional abilities and empathic skills by elaborating emotional intelligence in general. In education one increasingly encounters discrepancy between theory and practice. Teachers are unable to apply their knowledge in practical work, which is testified by problems of discipline, the low level of motivation as well as communication difficulties with pupils' parents. These and all results mentioned in the research specify teachers' requirements that cannot be met by just 36-hour further education courses. Teachers need regular and deep support that would offer a transformative learning environment characterised by reflection and self-evaluation. It has been stated that supervision is reflective by nature and will thus promote teachers' skills of reflective activity. Thus Pedagogical supervision is one of the support forms stimulating development of reflexive skills and can help teachers to solve problems in their professional work, as supervision tends to look for sources of problems through reflection and self-evaluation.

This theoretically obtained conception coincides with the idea acquired during in-depth interviews that educators need assistance in the form of Pedagogical supervision.

Consequently, the research has confirmed that the supply of Pedagogical supervision is consistent with the indispensable demand of present-day educators. So there is an importunate need to scientifically acknowledge Pedagogical supervision as a valuable and indispensable form of assistance in teachers' professional development. Understanding of Pedagogical supervision as a support form has to be fostered as it helps accept challenges, overcome difficulties and solve problems, and eventually develops teachers as persons and professionals.

Although the empirical research was carried out within two secondary schools in Latvia, it can be considered that the conclusions drawn from it are topical throughout the country in general as certified by the compliance of the results gained by both empirical and theoretical research. Further investigation could be a deeper study of Pedagogical supervision as a new form of support in teachers' professional development. It is important that Pedagogical supervision on a scientific level make headway   for comprehensive school teachers just as it has been for social pedagogues.

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Motivation for Students to Participate in Non - Traditional Outdoor Activities

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Abstract. In recent times sedentary work and sedentary lifestyle have become some of the most topical issues and discussion subjects. The problems caused by sedentary lifestyle are faced not only by adults, but by young people too. While addressing surrounding students we have concluded that students do not always necessarily want to take part in classic sports events, as it can be hard to find the motivation, or factors that would motivate them to prepare and take part in such competitions. Students find less traditional sports events in rural environments more binding and motivating, where participants need to prepare and promote the interest in sports through cooperation and a daring in a non-standard environment. These activities are directed towards creating a sense of community, enhancing inner motivation and encouraging character development by motivating the participants to overcome their self-perceived boundaries and not to give up. A variety of outdoor recreational and adventure activities that provide new challenges and unprecedented experiences is held. Examples of sports events in Latvia include „The Strong race”, „X-race”, „Dublis” and different kinds of orienteering competitions the implementation of which requires a rural environment with its natural and artificial obstacles. During the study different students' opinions about the motivating factors for participation in such events will be assessed along with students' opportunities and willingness to engage in physical activities while faced with the challenges of a rural environment. Purpose of the study: To assess students' main motivating factors when participating in physical outdoor activities and competitions. Subject of the study: Participants and organizers of the outdoor activity „The Strong Race”**.** Methods of research: theoretical, empirical and statistical. Most important conclusion is that in the classic race the motivation of winning something is no longer sufficient enough to draw a wide range of young people towards movement activities. Most of the young participants do not deny that to be good at movement activities requires a daily workout, however, during the race they want to enjoy themselves alongside their peers and friends. These are the nowadays key points how to get young people involve in sport activities.

Keywords: physical activities, motivation, outdoor activities and competitions, the rural environment.

Introduction

Some recent technological developments indirectly promote and develop a sedentary and unhealthy lifestyle. As a consequence ways of tackling sedentariness are increasingly being discussed, and the need to change our attitudes towards sports and different kinds of sports activities is gaining relevance. Startling facts were evaluated in the Latvian citizens' health influencing habit study in 2010. It points out that Latvian citizens (aged 15-64) are not taking sufficient care of their health:

- different types of objective and subjective health issues are characteristic to many of the respondents, especially for females;
- only 39,9% of the respondents do physical exercise at least 30 minutes a day, 2 to 3 times a week;
- only slightly more than half the respondents have a normal body mass. A large body weight and overweight is seen among a high proportion of the population – 45,1% respondents (Pudele, Villeruša, 2010).

This is the background of the problem and these numbers are evidence to the necessity to use as many motivating factors as possible to attract people to sports activities. Some of the currently most popular outside recreational activities for young people are unconventional outdoor activities and mass events, where participants must overcome obstacles in unusual circumstances thus affirming their capacity limits. One of such events in Latvia is "The Strong race", which attracts a large number of young participants. "The Strong race" is the first and only one extreme endurance mass race in the Baltic countries, which includes jogging, elements of classic cross-country and different skill and force discipline elements. It is a sporty challenge to everyone as the race takes place in unusual environments

(Nolikums. DNB…, 2015). The aim of the article: To assess students' main motivating factors when participating in physical outdoor activities and competitions.

Activities that aim is to promote a healthy and active lifestyle have become increasingly popular among the Latvian youth. "The Strong race" is one of the events in Latvia which takes place in the outdoor environment and brings a lot of young people together in one place. This race was chosen for the object of our study as it enabled us to reach a large target audience of people in the 18 to 25 years old age group. The subjects of the study are the participants and organizers of the leisure activities event "The Strong race".

In the first part of the research a participant database was built and analyzed. The runners were grouped by age in order to compare changes in participant demographics in "The Strong race" from one year to the next between 2010 and 2014. In the second part of the research we carried out an online survey. The aim of this survey was to assess the views of young people on their motivating factors for participating in physical activities competitions. When analysing responses, we noted that this outdoor activity event can be viewed as more than just a race by the young participants.

Methodology

Methods of research: Theoretical (analysis of literary sources, research of regulatory acts, analysis of documented material), empirical (online survey – 478 respondents aged between 18 and 25 took part, responses were given in accordance to the Likert scale; direct interviews) and statistical processing of the results with SPSS17.

Results and discussion

Recreational researchers in their publications have written that people nowadays move away from nature, moving away from themselves. In doing this one degrades himself in the era of work and technology, forgetting about pleasure, leisure and relaxing activities. Increasingly, it is concluded that stress, depression and burnout syndrome are the major human internal environment-damaging and destructive factors. American researcher R. Louv writes about the lack of human interaction with nature-induced disturbance. He assumed that many people today experience a lack of natural factors in their life, therefore conducting activities such as hiking, boating, climbing mountains, Sunrise-watching has become a therapy that restores operational capability, and improves physical and mental condition (Louv, 2005). Nature provides us with resource rich environments for various kinds of leisure activities - fields, forests, rivers, beaches, Sun, wind, etc. One could argue that to organize movement activities in the open air does not require costly funding. At the same time, it creates a challenge, which is an essential factor to motivate activities for people at a young age, providing satisfaction for achieving goals, overcoming barriers and improving their abilities. Also regarding the services, programs, and management implementations, from to the survey responses of young people we can safely conclude that the natural environment and its resources provide this positive motivation for action without a large investment.

The question arises, why are today's studies of outdoor activities only about young people, and not for the society in general? Physical activities were once tied into everyday routine and were perceived as matter-of-course, but technological advances have reduced the common movement activity. This of course affects how we feel - individual rest and recovery has historically never been a big problem, but nowadays it sometimes even requires intervention of the government to develop special programmes for the promotion of human well-being and for drawing the public's attention to it (Henderson, 2006).

In his research Latvian scientist J. Trusins concluded that for every person the everyday work process changes the capacity and the functional state of the human body. To maintain optimum capacity levels, we need to ensure rational work and rest periods. This means that the periods when we work are interspersed with periods of rest. This conclusion was reached through consistent results of physiological assessments (Trušiņš, 1996). Energy resources are being used during the work of different parts of our physiological systems especially during the work of nerve and muscle cells. Cells can only use a certain amount of energy resources, which I. Pavlov called the work barrier. Violation of this barrier results in the beginning of incapability, causing progressive fatigue. Fatigue dictates the quality

and quantity of work. Human fatigue is a comprehensive process that organic essence has a protective reaction against, but its physiological mechanism is brain cortical centre lockdown. To restore the forces that are consumed by work, humans need a physical activity break, which restores the human energy resources and creates an outdoor activity phenomenon. A recent psychological investigation aimed to show how these activities and nature itself benefit the recreational process after a period of everyday stress at home despite physical exhaustion during the activities in nature. Outdoor activities are a good way to get rid of distress and to leave the troubles of the workplace behind, especially for people living in urban areas and doing intellectual work on a daily basis (Gerlach, Schmitz, 2006). But how does one motivate people to do more physical activities?

Motivation is not unambiguous and for the most part is viewed as a poly-modal body, which initiates a person's activity, which stimulates and fortifies a person's actions, attitudes, necessities and interests. Three motivational groups are important in action – physiological, psychological and socio-motive (Reiss, 2002). These different motives mutually affect one another creating a person's behavioural habits, which with time change into personality traits. Multiple researches have emphasized that motivating environmental influences are very important, especially in youth, because it is connected with the young person's individual openness, discovery and the necessity for self-assertion (Ryan, Deci, 2000). Personality motivation process in sports and movement activity domain is explicitly complicated. It is connected with every person's values, will, goal awareness, and performance capabilities, and this is affected cumulatively not only by individual factors, but also by the social and environment factors (Hagger, Chatzisarantis…, 2002).

Today's social and environmental factors are important motivational and incentivising factors for taking part in sports and active leisure activities. Similar research was conducted in the United States in 2013. This statistical research shows the participants' leading motivational factors for doing outdoor activities. During the survey, 53% of the respondents involved in outdoor activities said that they did it to keep physically fit. 54% of the respondents considered outdoor activities an opportunity to spend more time with family and friends. But, most importantly, 72% of the respondents said they do it just to spend more time outdoors (What motivates you…, 2013). Like all outdoor activity participants, youth and young adult participants are also motivated to recreate outdoors by being with loved ones and getting exercise. In a similar research in the United States in 2014 it was shown that 75 % of young people in the 18-24 year old age group saw the factor of „getting exercise" as a top motivating factor and 60 % saw the factor of „keeping physically fit" as important. At the same time 51 % indicated the factor of spending more time „being with family and friends" as motivating to do outdoor activities. (Outdoor Participation…, 2014).

To assess the views of young people on their possible motivating factors to participate in physical activity competitions, a survey was carried out. Before the survey was carried out the participant database was analyzed, and the runners were grouped by age in order to allow us to make a comparative analysis and to assess directly the youth age group in next survey. Women's and men's starts were analysed separately, Figure 1 shows the male participant distribution by age in the years 2010 to 2014 (Figure 1).
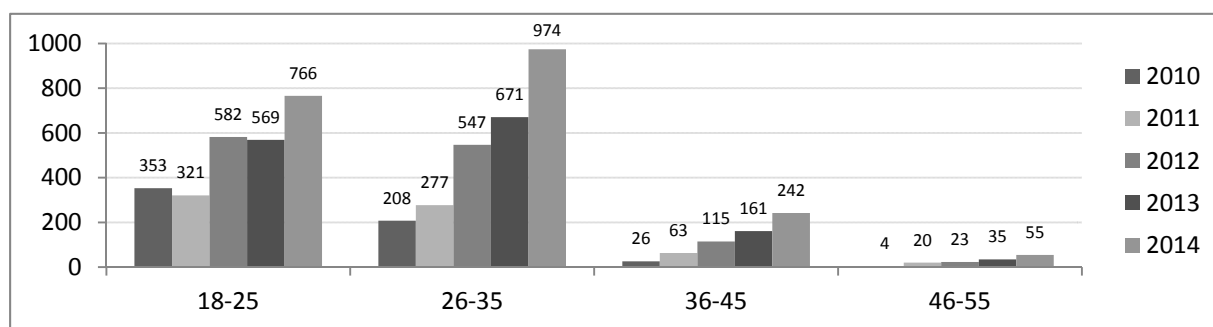
Figure 1. The numbers of male participants by age group between 2010 and 2014.

It can be seen that the 18-25 year old and 26-35 year old groups dominated the competitions every year. Among female "Strong race" participants 18-25 year olds were the most active age group was (Figure 2).

A large increase of participants in all age groups was noticed in 2014. The 20-25 year olds were the largest age group by number of participants. This group was the most active in all five "Strong race" events.
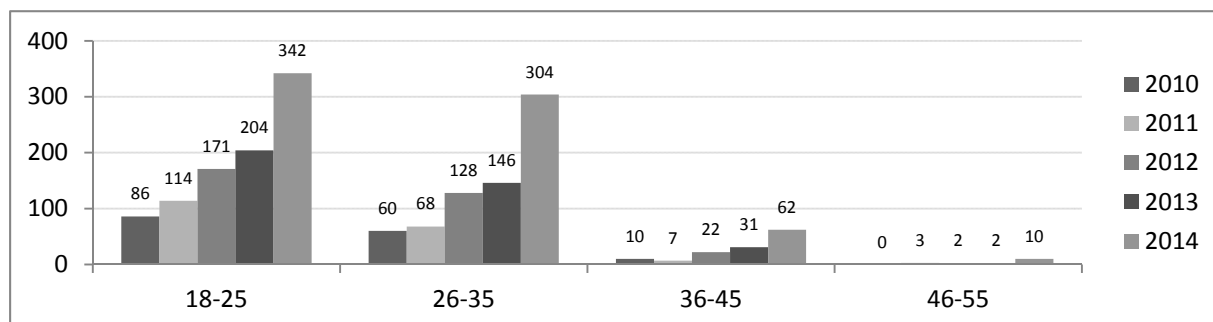
Figure 2. The numbers of female participants by age group between 2010 and 2014.

Data shows that the most active participants in this race are young people, which is also the target of our study. Motivational factors for young people to participate in such activities were examined in the next poll. Most active participants who participated in the survey were the young people – 18-25 year old students – 243 men and 235 women interviewees – 478 respondents altogether. With the help of the survey various motivational factors of individual significance to participate in non-traditional outdoor environmental events were evaluated. The following options were proposed in the questionnaire as the most important motivational factors, based on the theoretical information analysis and a summary of the discussion:

- to win the race and get an award,
- to overcome all obstacles,
- to finish,
- to experience shared activities,
- to receive a good service in the event,
- to gain self-assurance – "overcome myself - to prove to myself that I can",
- to assess myself in comparison with others – "show others that I can",
- to get involved in activities with friends and acquaintances,
- to feel dominance over others during competition.

When analyzing responses, it should be emphasized that this outdoor activity event is more than just a race for the young people. Among the largest portion of participants motivating factors for these activities were not associated just with victory or winning an award, in fact quite the opposite. Responses show that winning the race was not a popular motivator with the average rating for this factor of only 2.08, and 412 of 478 respondents or 86.2% rating the factor with 3 points or less on the importance scale (the most common rating was a 1) (Figure 3). Feeling dominance over others during competition emerged as the factor of second lowest importance. Only 19.5% of respondents considered this factor very important (5 out of 5), while the most common rating was a 3, given by 31.8% of the respondents (Figure 3).
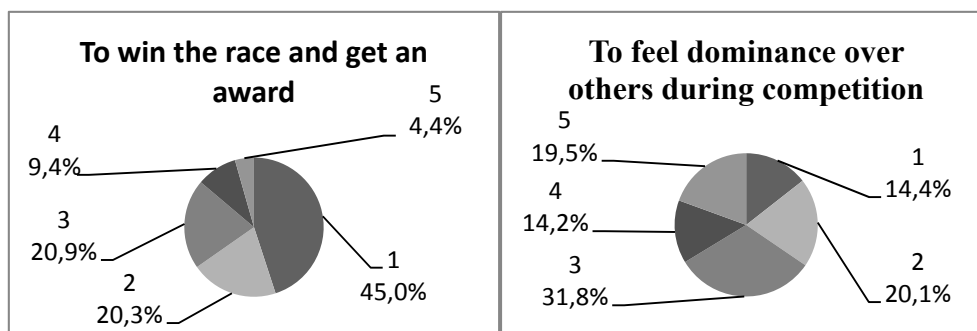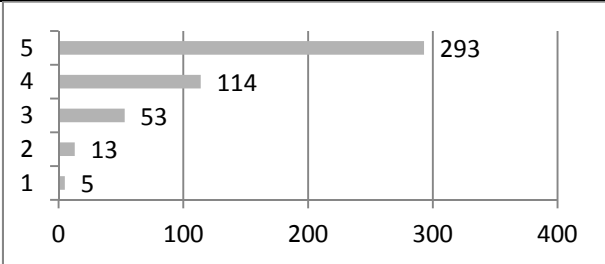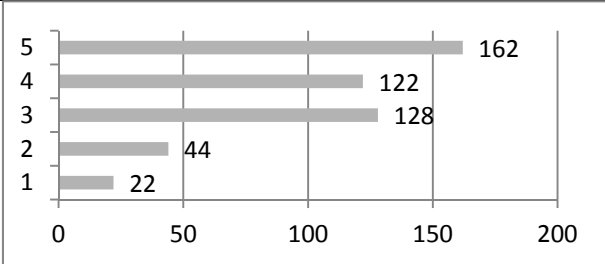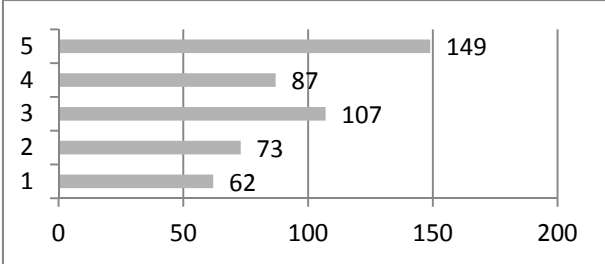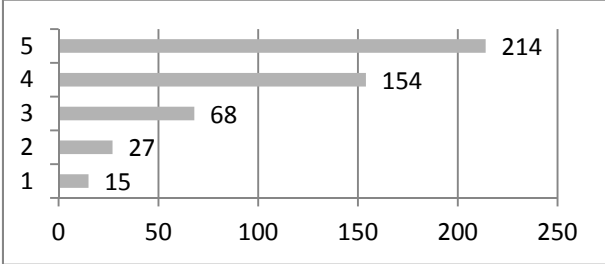
Figure 3. Motivating factors: To win the race and get an award, to feel dominance over others during competition (rating on a scale of 1 to 5 where 1 is not important, and 5 is very important).

The four factors with average ratings ranging from 3.0 to 4.5 shown in table 1 were seen by respondents to be more important than winning the race and feeling dominance over others. 293 people rated experiencing shared activities as very important – students want to feel different adventures and unusual situations. Along interesting activities during the competition, part of the students also want to enjoy a pleasurable service during the event (food, drinks, changing facilities, car parking, event information, relaxation tents) and 162 respondents rated this factor with 5 points. "To receive a good service in the event" received an average rating of 3.75. "To assess myself in comparison with others – "show others that I can", was noted as important by 49.4% of the respondents, while 28.2% respondents saw it unimportant. The average rating for this factor was 3.39 (Table 1).

Table 1

Participants motivating factors in the race

Motivating factors	Rating on a scale of 1 to 5 (rating on a scale of 1 to 5 where 1 is not important, and 5 is very important)	Statistical Data	
To experience shared activities	5: 293; 4: 114; 3: 53; 2: 13; 1: 5	The average	4.42
		Standard error	0.04
		Mode	5
		Standard deviation	0.87
To receive a good service in the event	5: 162; 4: 122; 3: 128; 2: 44; 1: 22	The average	3.75
		Standard error	0.05
		Mode	5
		Standard deviation	1.15
To assess myself in comparison with others – "show others that I can"	5: 149; 4: 87; 3: 107; 2: 73; 1: 62	The average	3.39
		Standard error	0.06
		Mode	5
		Standard deviation	1.40
To get involved in activities with friends and acquaintances	5: 214; 4: 154; 3: 68; 2: 27; 1: 15	The average	4.10
		Standard error	0.05
		Mode	5
		Standard deviation	1.04

For young people one of the most important motivating factors in this group is to get involved in activities with friends and acquaintances; 32.2% of respondents indicated this as important (4 out of 5) and 44.8% of respondents as very important (5 out of 5) (Table 1). It is great to see that the opportunity

to work with their peers and feel a sense of belonging in the movement activities event is an important factor of the young people's assessments. Overcoming difficult obstacles together and providing a helping hand to each other is a very potent team building exercise. During the discussion a lot of young people said that they cooperate with people they know on a daily basis, but these events provided them with the opportunity to help and be helped by many participants whom they had never met. Experiencing shared activities was seen as an important or very important factor by 85.2% of the respondents, it was given an average rating of 4.42 (Table 1).

A group consisting of the three most important motivating factors for students is depicted in Figure 4, all three received an average rating of above 4.5. The most important motivating factor for young people by average rating, however, is gain to self-assurance – "overcome myself - to prove to myself that I can", that it is possible to overcome all the obstacles, and complete the distance to the end regardless of the place - just finish! 93.1% of the respondents noted this as important to them and 89.5% of the respondents considered being able to finish as the key goal. The average rating for this factor was 4.83 and the most common response a 5 (Figure 4). Participants appreciate the opportunity that the race provides – the ability to prove that it is possible to overcome difficult obstacles, one's fears and weaknesses, as well as to push their abilities. Responses indicated that young people increasingly value fulfilling internal goals that they have set themselves, rather than goals set to them by the format of the race. To gain self-assurance – "overcome myself - to prove to myself that I can" was seen as important or very important by 93.3% of respondents (average rating was 4.68 and the most commonly given rating was a 5).
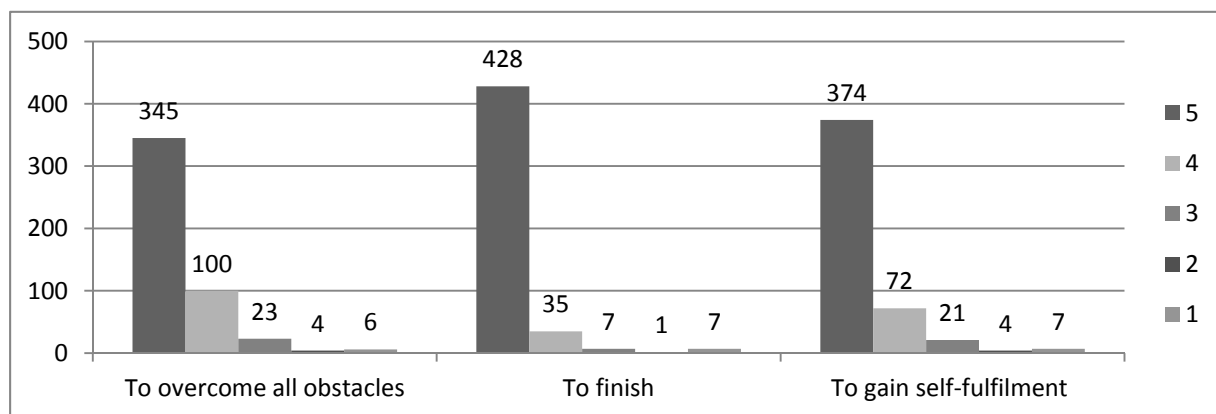
Figure 4. Motivating factors: To overcome all obstacles, to finish, to gain self-fulfilment (rating on a scale of 1 to 5 where 1 is not important, and 5 is very important).

Conclusions

We can conclude from the views expressed by young people on the race and discussions about the future perspective of this kind of events in Latvia that:

- In the classic race the motivation of winning something is no longer sufficient enough to draw a wide range of young people towards movement activities. Most of the young participants do not deny that to be good at movement activities requires a daily workout, however, during the race they want to enjoy themselves alongside their peers and friends. Winning the race is seen as a secondary objective. Of the 478 participants 412 or 86.2% rated the factor of winning the race with only 1 or 2 points – meaning they viewed it as insignificant or unimportant.

- The youth at their core want to challenge their own limits, so for the majority feeling dominance over others is not high on the motivating factor list. Only 19.5% of the respondents rated it as very important, while 31.8% of the respondents rated it as average.

- Enduring the competition all the way to the end was one of the two most popular motivating factors – "to finish" received an average rating of 4.83. In these active events taking place in a nature environment the young participants see proving their determination as the ultimate benchmark for success.

- The other most highly rated motivating factor, closely related to finishing the race, is to gain self-assurance – "overcome myself - to prove to myself that I can", it was rated as important or very important by 93.3% of the respondents (average rating of 4.68 and the most commonly given rating was a 5). Adding weight to the idea that students predominantly found motivation in proving their determination was the highly rated motivational factor of completing all the obstacles, which received an average rating of 4.62.
- The social environment during a competition is important for young people. The socializing aspect of sports is accomplished really well by working and overcoming difficulties together, and a diverse set of naturally formed and artificially constructed obstacles offers the perfect environment for doing that. At the same time being in the nature serves a recreational function, reducing dominant influences of the daily stress (such as effects of being constantly exposed to social media). When asked after competitions of this sorts, participants tended to describe themselves as feeling emotionally fulfilled, physically tired, but also satisfied by their progress and personal achievements.

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Overview of Active Learning/Teaching Methods for Development of School Students' Entrepreneurship

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Abstract: The research aims to distinguish the most efficient teaching/learning methods for development of 7th-12th formers' entrepreneurship. The research was carried out in Lithuanian schools of general education in 2014. The comprehensive data obtained from the questionnaire survey of 120 school learners, their observation and the interview with entrepreneurs emphasised the importance of entrepreneurship education. The following methods of entrepreneurship education were indicated by the teachers as the most frequently applied and most efficient: collaboration, problem-based learning, experiential learning, discussions, consulting, project method and educational excursions. The majority of teachers partially employ coaching for entrepreneurship education. The article emphasises the benefit of teaching/learning methods to school learners' internal potential, free flow of thoughts, originality and talent, development of personal qualities, linking of theoretical teaching material and practical activities. The observational research disclosed that the method of collaboration develops learners' personal qualities and their abilities to act in a group. Such personal qualities of learners as creativity, responsibility, problem solving, time planning were expressed strongest.

Keywords:active teaching/learning methods, entrepreneurship education, comprehensive school.

Introduction

Entrepreneurship is one of the main aspects, which predetermines individual's successful socialisation in contemporary world. The European and Lithuanian educational goals refer to entrepreneurship as one of the prioritised competences to be developed, it reflected in the documents "Europa 2020: A strategy for smart, sustainable and inclusive growth" (Pažangaus, tvaraus..., 2010) and "The National Educational Strategy for 2013-2022" (Valstybinė švietimo…, 2014). The Lithuanian State *Progress Strategy "Lithuania* 2030" (Lietuvos pažangos…, 2011) indicates that only responsible, creative, proactive, open and thinking personalities create the welfare of the state, predetermine the success of the state, make up the society, whose members are able to meet global challenges of competition in contemporary constantly changing world. Having analysed the contemporary conception of entrepreneurship, it becomes clear that entrepreneurship is understood not as establishment of targeted businesses but in its broader sense as an ability to generate and create social added value (Raposo, Paco, 2011). To achieve this goal such personal qualities as self-confidence, risk taking, critical thinking, capacity for innovation, etc. are needed. Not all the aforesaid entrepreneurship features are inborn and the majority of them are acquired. Therefore, it is necessary to focus on entrepreneurship education and its importance. School is one of the main places, where entrepreneurship has to be developed. Integration of entrepreneurship into all the study subjects is of utmost importance (Entrepreneurship Education..., 2012). One of the most important factors, which facilitates achievement of high and quality results in entrepreneurship education, is choice of appropriate active teaching/learning methods and their application in educational institutions (Župerka, Župerkienė, 2011; Šiaučiukėnienė, Visockienė, Talijūnienė, 2006). Coaching is one of such methods, which provides conditions for an individual to realise own potential, to self-dependently and responsibly make decisions in various life situations, to forecast their outcomes as well as to reflect on them (Juozaitis, 2012; Downey, 2008). The teaching aids and methods for entrepreneurship education have been analysed by A. Župerka (2011); L. Šiaučiukėnienė, O.Visockienė, P. Talijūnienė, (2006); Jelagaitė A. (2015). K. Komulainen, P. Naskali, M. Korhonen, S. Keskitalo – Foley (2011), K. Komulainen M. Korhonen, H. Raty (2009), I. Zalenskienė, L. Žadeikatė (2008) have carried out research on the attitude of teachers and learners towards entrepreneurship and its development. The situation related to professional development of teachers of entrepreneurship has been investigated by G. Žibėnienė (2012), teachers' preparation to teach entrepreneurship has been research focus of I. Kepalienė, B. Žygaitienė, K. Petruškevičienė (2013).

As it has been pointed out in the Conception of Lithuanian Education (Lietuvos švietimo…, 1992) one of the most important goals is "to develop a critically thinking individual, who is able to consider the most essential issues of human existence, to responsibly make decisions and to function self-dependently". Following this goal, it is important to ensure that, having chosen appropriate teaching/learning methods, teachers at school are able to provide students not only with subject-specific knowledge and to prepare them for lifelong learning, to develop their internal motivation, to encourage their critical thinking, self-dependent search for and evaluation of information and to make decisions. The research aims to single out the most efficient teaching/learning methods of 7th-12th formers' entrepreneurship education. The objectives of the research: 1) to analyse respondents' opinion about the importance of entrepreneurship education; 2) to investigate teachers' attitude towards peculiarities of applying active learning methods appropriate for entrepreneurship education.

Methodology

The research was carried out in Lithuanian schools of general education from March to May 2014. The conducted analysis of scientific literature and documents allowed to select comprehensive information about entrepreneurship education, which was essential designing questionnaire surveys for teachers. The questionnaire form included four types of scales: nominal, interval, ordinal and attitudes ones. The closed-type questionnaire survey was employed to identify peculiarities of applying innovative methods in entrepreneurship education. Electronic questionnaire method was chosen in this research, when the questions were individually sent to the respondents electronically.

The observation of 7th formers in one class of Vilnius gymnasium was also carried out, when 2 school learners (13 years old) were observed during 6 lessons. The usual atmosphere was prevailing in the classroom and consultations regarding selection of the observed learners were held with the head teacher of the class and the school psychologist. During the lessons of food preparation the learners had to prepare culinary meals and to work in groups. The school learners were grouped (groups were formed "by lot"). Two school learners of different types of personality (the class "leader" and the "passive" learner) were chosen for observation in the classroom. The method of collaboration was applied during lessons of technologies. The efficiency of method was assessed employing a 5-point scale of evaluation of school learners' personal features and abilities, when 5 points meant the personal qualities and abilities expressed strongest. The qualities of the observed school learners were evaluated according to the designed observation protocol.

The interview method was chosen as an additional method for specification of information acquired during the questionnaire survey. The research was conducted following the principle of voluntary and confidentiality. The participants of the research were personally familiarised with the goal of the research, all the questions that emerged to them were answered. The interview questions were clearly formulated, one question was asked at a time and the principle of consistency was observed. While interviewing the entrepreneurs (social partners, consultants on issues of entrepreneurship education), the audio recording of the interview was authorised by them as well as permission to use the interview record in this research was also obtained. The material acquired during the interview with entrepreneurs was processed considering the consistency of the presented questions. Each quotation contains the number of the informant of the interview. The quantitative expression of the answers, i.e. the number of the answers of the entrepreneurs ascribed to one or another category, was not calculated. It was considered that the opinion of each entrepreneur is unique and valuable.

The sample of the quantitative research was 120 teachers (72 % women and 28 % men), whereas unequal distribution of genders could have been resulted in by the teacher population, where the female teachers prevail in the majority of Lithuanian schools. The respondents from varied age groups participated in the research (the most frequent age group was from 36 to 55). The professional qualification of the respondents ranged from that of a teacher to an expert and the biggest number of them were senior teachers and teachers methodologists.

The biggest number of the teachers in the survey were teachers of technologies (51 %), the sample also included teachers of Lithuanian, Russian, English, German, human safety, moral education, economics, information technologies, mathematics, politics, sociology, history, biology, chemistry, geography, fine

arts, music, religion, ethics and physical education. The active involvement of teachers of technologies was predetermined by the conference on issues of technology and entrepreneurship education integration.

The majority of the respondents have extensive experience in teaching: one third of respondents have more than 25 years of experience, others have been teaching for 10–21 years and only a small proportion of the respondents (10 %) have been working from 1 to 5 years. The biggest number of respondents work in basic and secondary schools (63.3 %), whereas the rest of them are from gymnasiums. The considerable number of the teachers work in several form concentres, mostly in basic education (7th–8th forms) – 48.6 %. A lot of the respondents (26.7 %) work in the concentre of 9th–10th forms and the rest of them are from secondary education.

The sample of the quantitative research embraced 6 entrepreneurs (3 men and 3 women), the age of the respondents ranged from 26 to 45 years. All of them are holders of higher education diplomas and reside in Vilnius.

The sample of the observational research: two 13 year old school students (boys).

Results and discussion

1.   The opinion of the respondents towards importance of entrepreneurship education.

All the teachers, who participated in the research, indicated that they tend to integrate entrepreneurship education; 68.5 % of the teachers in the survey pointed out that entrepreneurship education plays a highly significant role in institutions of general education, whereas the rest of the teachers agreed that it is significant. Similar results are presented in the research conducted by I. Kepalienė, B. Žygaitienė, K. Petruškevičienė (2013). Following the research data it can be stated that teachers perfectly perceive the significance of learners' education in contemporary situation.

The research conducted by the authors of the article revealed that the bigger number of teachers (76.5 %) tend to think that the knowledge of entrepreneurship possessed by learners is sufficient, the rest of the respondents think that the school learners lack knowledge of entrepreneurship. Having compared the results of our research with those of the research carried out by I. Zaleskienė and L.Žadeikaitė (2008) earlier, a positive chance in entrepreneurship education may be observed. The results show that understanding the importance of entrepreneurship education, the teachers carry out entrepreneurship education more widely only the extent is not sufficient to acquire absolutely positive results. However, joint common activities of all the participants in the process of education are insufficient.

According to the opinion of entrepreneurs, entrepreneurship education at school is important and it has been improving. *"I think entrepreneurship education in Lithuanian basic schools is getting better" (respondent 6)*. A number of entrepreneurs in the research put forward a suggestion to teach entrepreneurship as a separate study subject. *"The situation of entrepreneurship education has been improving, lots of projects have been implemented but not all the teachers have been sufficiently integrating entrepreneurship into the study subjects they teach; if the lessons of entrepreneurship education were introduced, the problem would be solved..."(respondent 5). "There is no study subject, which is not appropriate for entrepreneurship education" (respondent 2)*. The majority of the researcher (A. Župerka (2010); Kepalienė, B. Žygaitienė, K. Petruškevičienė (2013); I. Zaleskienė and L. Žadeikaitė (2008) state that the closest links of entrepreneurship education are observed with economics, technologies (household economics) , information technologies and mathematics. The entrepreneurs also noticed that entrepreneurship education is widely integrated during lessons of economics and technologies. *"Entrepreneurship is developed during joint activities, during activities in practical business training firms, training companies, creative workshops and fairs, where teachers of economics and technologies cooperate"(respondent 1)*. The most considerable number of entrepreneurs point out that it is particularly important to start developing school learners' entrepreneurship at pre-primary age *"School learners' entrepreneurship has to be developed as early as in kindergarten and in the family in early childhood" (respondent 3). "I would recommend developing entrepreneurship at all stages of education" (respondent 2)*.

The results of the research carried out by I. Kepalienė, B. Žygaitienė, K. Petruškevičienė (2013) revealed the importance of entrepreneurship education as the majority of teachers (70 %) agree with the statement that entrepreneurship education helps learners successfully organise and manage own life, entrepreneurship education enables school learners to identify opportunities and to create economic value.

2.   Active teaching/learning methods appropriate for entrepreneurship education.

Analysing the peculiarities of entrepreneurship education in schools of general education, attempts are made to find out what active teaching/learning methods are applied by teachers during lessons (Figure 1).
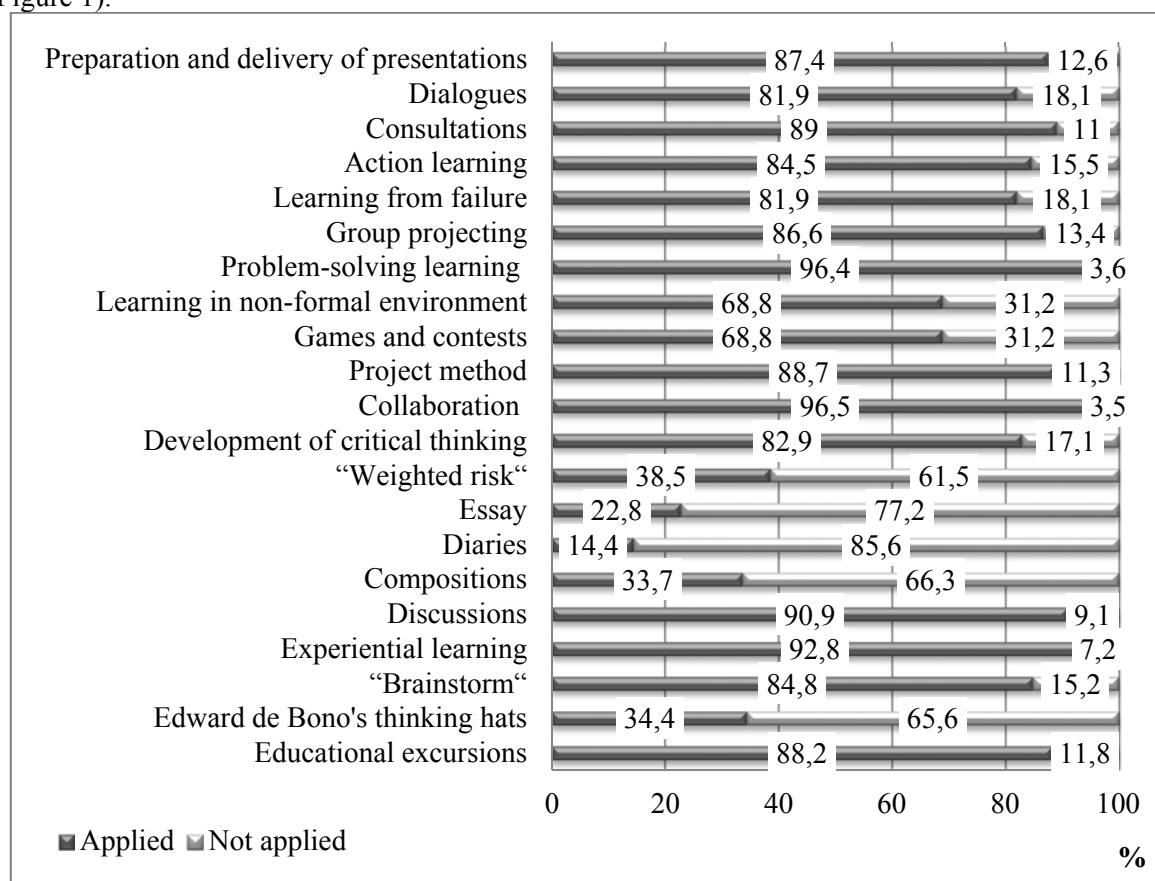
Figure 1. Methods applied by teachers for development of school learners' entrepreneurship during lectures.

Collaboration (96.5 %), problem-solving learning (96.4 %), experiential learning (92.8 %), discussions (90.9 %) are the *most frequently* applied methods of entrepreneurship education during lessons. Such active teaching/learning methods as consultations (89 %), project methods (88.7 %), educational excursions (88.2 %), preparation and delivery of presentations (87.4 %), group projecting (86.6 %) and "brainstorm" (84.8 %) are also *frequently* applied. The research conducted by A. Župerka (2010) proved that in the process of education the respondents apply methods of learning through collaboration (63.6 %), active learning methods (54.5 %), tests (50 %) and group work methods (45.5 %) for entrepreneurship education most frequently. In her research A. Jelagaitė (2015) revealed that project work, business games, debates, which predetermine expression of personal qualities are most appropriate active methods of teaching of entrepreneurship to 11th-12th formers. More than half (64.8 %) of the Lithuanian respondents indicated the project method as the most appropriate one for entrepreneurship education, whereas 60.4 % of them pointed to the method of business games and 43.2 % of the respondents referred to the method of school enterprise. The German school learners (67.5 %) emphasised the importance of the frontal lesson.

The teachers, who participated in our research, were asked to choose the most efficient active teaching/learning methods appropriate for entrepreneurship education from the provided list (Table 1).

Table 1

The analysis of efficiency of methods appropriate for development of entrepreneurship (%)

Methods	Most efficient and efficient	Partially efficient	Hardly efficient and inefficient
Preparation and delivery presentations	61,2	27	11,7
Dialogues	54,9	36,9	8,1
Consultations	68,3	26	5,7
Action learning	86,2	9,8	4
Learning from failure	71,6	22,5	5,9
Group projecting	70,4	25,9	3,7
Problem-solving learning	78,3	17,9	3,7
Learning in non-formal environment	72,8	17,5	9,7
Games and contests	58,9	29	12,1
Project method	69,3	24,6	6,1
Collaboration	80	18,2	1,8
Development of critical thinking	70,6	18,6	10,8
"Weighted risk"	42,7	29,3	28
Essay	16,5	31,8	51,7
Diaries	16,7	31	52,4
Compositions	26,6	30	43,3
Discussions	56	37	7
Experiential learning	70,5	25,7	3,9
"Brainstorm"	58,3	28,7	12,9
Edward de Bono's thinking hats	34,8	33,3	36,9
Educational excursions	81	15,3	3,6

The efficiency of methods was evaluated employing a 5-point scale (answers: *1- most efficient, 2 - fficient, 3 - partially efficient, 4 - hardly efficient, 5 - inefficient*). According to the respondents, *the most efficient* methods for entrepreneurship education include action learning (86.2 %), educational excursions (81 %), collaboration (80 %), problem-solving learning (78.3 %), learning in non-formal environment (72.8 %), learning from failure (71.6 %) and critical thinking development (70.6 %). It can be noticed that the methods referred to as the most efficient or efficient methods coincide with the list of most widely applied methods. The respondents consider Edward de Bono's thinking hats (33.3 %), essay (31.8 %), diaries (31 %) and compositions (30 %) as *partially efficient* methods.

The entrepreneurs recommend that teachers try the following methods appropriate for entrepreneurship education during their lessons: teamwork, practical assignments, modelling of various situations, setting up of simulation business practical training firms, games that imitate business, educational excursions to different companies. *"Work in a team modelling various situations, discussions on topical issues, etc." (respondent 1), "Work in groups, establishment of business, contests, auctions, model of real business"(respondent 2), "Lessons away in different companies"(respondent 4).* The entrepreneurs, who took part in the research, stated that entrepreneurship is developed best during practical classes, applying team work, and various interactive means. *"Basics of entrepreneurship may be acquired solving problems, finding solutions..., search for opportunities, learning to collaborate." (respondent 3) "It is possible to apply various interactive means, simulations, which involve learners into teaching*

process"(respondent 1), "To create business practical training firms". It is also recommended inviting entrepreneurs, lecturers, who deliver business lectures, to schools. *"Entrepreneurs and specialists in their fields may be invited to schools to share own experience from practical side"(respondent 2), "Collaborate with regional companies or special lectors"(respondent 1). "I would recommend inviting a coach to school to enable school learners to understand why knowledge and abilities are needed and to motive them to obtain them..."(respondent 5).*

According to the opinion of a big number of researchers (Kietavičienė, 2014; Juozaitis, 2012), the active process of education may be implemented through the relation of teacher and learner, i.e., through coaching. The competence of coaching is linked to abilities of life skills development, safe environment creation, communication and collaboration abilities and is one of the main forms of school learners' entrepreneurship education; therefore, it is necessary to know the number of respondents, who apply coaching during lessons. The data of our research showed that the majority of teachers *partially apply* (60 %) coaching and there were only 12.5 % of the respondents, who *apply* coaching; 20.8 % of the teachers do not use coaching and 5.8 % of them are not aware of such a form of education. The majority of entrepreneurs in the research also mentioned the significance of coaching: *"I would recommend that teachers try integrating coaching into the process"(respondent 5).*

During the observation attempts were made to identify efficiency of collaboration, which is the active teaching/learning method most frequently applied by teachers. The influence of collaboration on development of learners' personal qualities and their abilities was observed. Having reviewed the results of the observed lessons, it can be stated that the method of collaboration is efficient and develop learners' personal features and abilities. The personal qualities and abilities of both "the leader", and "the passive" learners showed positive developments practically each lesson, the school learners tended to cooperate attaining common goals, learnt from each other, employed own positive features and felt a member of the group. It was noticed that the method of collaboration has to be continuous to achieve better results in a collaborating group. Practical classes and group work also had a significant influence on the results as they encouraged school learners to unite and to seek common compromises to attain the goal. Creativity, responsibility, problem solving and time planning were the personal qualities of school learners, which were expressed strongest during collaboration. The school learners' abilities to link theoretical teaching material to practical activities and to provide support to group friends pursuing common established goals were strongest revealed. A number of minuses were also observed as learners' attitudes differed, what resulted in conflicts in the group. However, the ability to solve emerging problems is one of the features of an entrepreneurial personality and provides him or her with life experience.

Analysing possibilities of entrepreneurship education in schools of general education, it is important to find out where teachers find most of the information on teaching/learning methods appropriate for entrepreneurship education. In terms of availability of teaching/learning methods, the information sources were evaluated using a 5-point scale (ranking: *1- highest availability, 2-high availability, 3- sufficient availability, 4- low availability, 5- unavailability*) (Table 2).

Table 2

The sources employed searching for the methods (as indicated by the teachers) (%)

Sources	Highest availability	High availability	Sufficient availability	Low availability	Unavaila bility
Books on entrepreneurship	21,8	31,8	28,2	10,9	7,3
Internet	42,6	34,8	16,5	4,3	1,7
Television, radio programmes	9,8	24,1	44,6	16,1	5,4
Conferences	15,3	40,5	32,4	10,8	0,9
Training courses on entrepreneurship	26,9	35,2	23,1	9,3	5,6
Scientific publications	13,1	38,3	30,8	13,1	4,7

The Table 2 shows that internet is one of the main sources of information (information on the methods of teaching/learning entrepreneurship: *highest availability* – 42.6 %, *high availability* – 34.8 %), entrepreneurship courses (*highest availability* – 26.9 %, *high availability* – 35.2 %) and books on entrepreneurship (*highest availability* – 21.8 %, *high availability* – 31.8 %). According to the respondents, there is no information on the aforesaid methods or this information is limited in television, radio programmes (*unavailability* – 5.4 %, *low availability* – 16.1 %) and scientific publications (*unavailability* – 4.7 %, *low availability* – 13.1 %).

Conclusions

It is equally important to develop school learners' entrepreneurship applying active teaching/learning methods during all the lessons. The empirical research showed that the teachers pointed out the following methods as the most frequently applied and most efficient methods of entrepreneurship education: collaboration, learning while solving the problems, experiential learning, discussions, consulting, project method and educational excursions. The majority of teachers agree that active teaching/learning methods facilitate revelation of learner's internal potential, free flow of thoughts, originality and talent, develop learner's self-dependence and responsibility. They also contribute to development of perception how to connect theoretical teaching material with practical activities. The majority of teachers only partially apply coaching. The provision of feedback and establishment of relations are the strongest expressed abilities of teachers as coaches. While creating favourable relation with leaners, beliefs and values are referred to as the most frequently employed factor.

The observational research disclosed that the method of collaboration develops learners' personal qualities and their abilities to act in a group. Such personal qualities of learners as creativity, responsibility, problem solving, time planning were expressed strongest. The abilities of school learners were best revealed in learning to link theoretical teaching material with practical activities as well as in provision of support to the peers accomplishing common goals.

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The Assessment of Social Justice in Lithuanian Education in the Context of Welfare State Conception

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Abstract: Researchers believe that social justice can be presented as a normative concept that characterizes the social situation as fair, consistent with human nature and rights. Though social justice is universal, but due to the inability to realize their rights and to meet the needs it is often linked by the people to the lack of social justice, and this is also true of education. Despite the fact that the national social models should ensure the social well-being, and, at the same time, social justice in education, however, the issue noted implicates the diversity of opinions and the lack of social justice assessment methodologies in education. That makes the basis for the relevance of the subject, and the main underlying question to the problem raised is how to evaluate social justice in education in Lithuania, in the context of welfare state conception? The aim of the article is to discuss the assessment methodologies of social justice in Lithuanian education in the context of welfare state conception. The objectives of the article are to discuss social justice in education in welfare states in theoretical terms and to give the analysis assessment methodologies of social justice in education (the case of Lithuania). The key findings of the research have been the following: the correct system of education can be achieved only in case of justice in various areas of society, and, thus, the assessment of social justice in education depends on contextual indicators (employability, poverty level, equal opportunities, and etc.). The theoretical analysis of the problem revealed its topicality, and the content analysis of assessment methodologies of social justice in education disclosed the functioning and limitations of these instruments. Thus, it can be said that for the future analysis of social justice in the field of education it would be appropriate to carry out a systematic monitoring of social justice in education by updating the key data and complementing it with the missing indicators, as well as the research findings of the public opinion on these issues as a component of social justice assessment.

Keywords: education, social justice in education, welfare state, assessment methodologies.

Introduction

Education is the area in which on a certain level most of the Lithuanian society is involved by a variety of formal and non-formal education programmes and other means. This fact can be illustrated by the 2011 Lithuanian census data. In comparison to the results of census in 2001, in 2011 the range of indicators characterizing the attained education of the population increased. E. g., the number of population 10 years and older with higher educationn per 1thousand rose by 1.7 in a decade, also a greater part of the population attained secondary education, and the population with primary education fell by one-third (Population by Educational..., 2011). However, social justice is not a given phenomenon, it is continuously supported by social policies. This is particularly associated with the welfare state facilities. Lithuanian and foreign scientists analyze in their works various aspects of welfare state conception, performance, opportunities and limitations (Guogis 2014; Jančaitytė, 2004; Smalskys, 2005; Skuodis, 2009, Sonda 2014). Social justice can be presented as a normative concept that characterizes the social situation as a fair, consistent with human nature and rights (Leonavičius, 1993, 230). Often this is related to the obligations of the state to its citizens, that preserve for them a certain minimum level of wealth, and this kind of the state is seen as a welfare state (Aidukaitė, Bogdanova, Guogis, 2012, 16). The Constitution of the Republic of Lithuania (Lietuvos Respublikos Konstitucija, 2013, 8) legitimizes the state commitments to their citizens as regards the matters of training and education in various formal education institutions. Nevertheless, the reports in the public domain and the works of scientists reveal transformations in the education situation, which can be attributed to the lack of social justice. On purpose to justify the relevance of the topic, this article aims at discussing the principles of social justice system (Bieliauskaitė, 2009), the access to education and social justice in Lithuanian schools (Iljina, 2014; Lazutka, Navickas, 2010; Trakšelis, 2015), the

assessment of education justice and the reform of higher education and justice (Purvaneckienė, Čiužaitė, 2010).

Summing up the findings of the research into the subject, it can be assumed that, although the social models corresponding to the existing welfare state regimes should ensure the social welfare, and social justice in education at the same time, however, the diversity of opinions and a clear lack of social justice in education evaluation methodologies/techniques are noticeable. This is what the relevance of the topic is based on, and the main underlying question is as follows: how and what methodologies and instruments can be employed to assess social justice in Lithuanian education in the context of the concept of the welfare state?

The article aims at discussing the assessment methodologies of social justice in Lithuanian education in the context of the concept of a welfare state. The objectives of the article are as follows: to discuss social justice in education in welfare states in theoretical terms; to analyse the methodologies of assessment of social justice in education in Lithuania.

Methodology

The research methodology is designed adequately to the research problem and research aim and objectives. The logic of its realization is presented in Figure 1:

- 1 • Theoretical research into the topic
- 2 • Research problem and objectives
- 3 • Research methods and tools
- 4 • Research results and summary
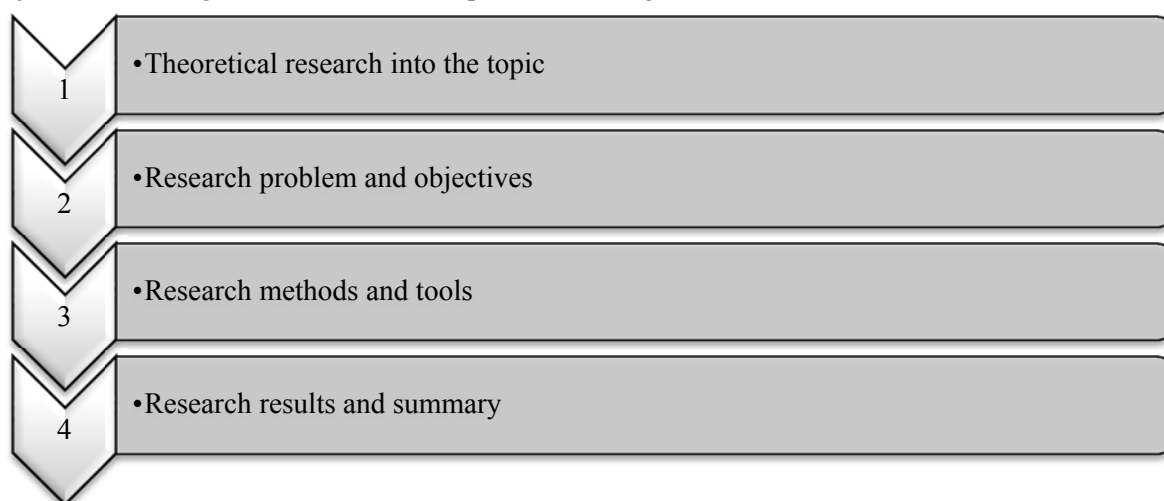
Figure 1. Research organization scheme.

The interpretation of the logic of the research organization allows arguing that the stages of the research have been chosen reasonably and are interrelated. In the stage of theoretical research, aimed at revealing the level of investigation of Lithuanian and foreign authors' scientific works (the method employed being the analysis of scientific literature), the concepts of social justice in education and their links to the mechanisms of welfare state implementation (e. g. the tools of social policy, the specifics of education systems in countries, and etc.) was highlighted. As scientists in their works based their theoretical insights on empirical findings, it helped to reveal a variety of approaches in assessing what social justice and its manifestations in education are. This is what the need to go deep into the methodologies of social justice in education assessment has been justified by, which is especially applicable in the case of education in Lithuania. Therefore, the research methods employed in the analytical stage of the research were the analysis of scientific literature and content analysis of social justice in education assessment methodologies.

Therefore, the method of research employed in the analytical stage has been content analysis of the assessment methodologies of social justice in education. The conclusions formulated on the basis of research findings may be related to subsequent research in the similar field studies when performing a comparative analysis in several countries.

Results and discussion

In order to find a solution to the main problem question how and what methodologies and instruments can be employed to assess social justice in Lithuanian education in the context of the concept of the welfare state, the scientific works, that are based not only on the theoretical insight, but also on empirical studies, were chosen.

The works of individual as well as a group of scientitists were chosen to disclose various aspects of welfare state and social justice in education. In order to define what a welfare state is and justify its types quite a number of authors rely on G. Esping-Andersen's insights. M. Sonda (2014) argues that G. Esping-Anderson classification of welfare states is based on the differences of the state, market and family institutions in certain countries. A. Guogis (2014) claims that the Western social world has the following models of a welfare state: the most generous universal, redistributive, socio-democratic typical to Northern European countries (in particular the Scandinavian countries), less generous is 'bismark', corporate, conservative to which Western European mainland countries can be attributed, and the most temperate, the least generous, marginal model - anglo-saxon liberal. The fundamental diference of these models is the dependence on market conditions. Since in the so-called liberal (marginal) regime countries the preconditions for social benefits and other services are the strictest, and in the corporate, conservative model countries social benefits and services are determined by the seniority and previous salary, the most attractive model for the welfare recipients becomes universal, redistributive (the socio-democratic), which is based on the social citizenship rights such as social support or assistance given to the poorest citizens of the country. Given the existing variety of extremely different from each other welfare models in Europe, it is difficult to expect that it is possible to create a single, standard welfare state model. All the more, it depends on the specific social content of the country, which is influenced by the political regimes and their social policy. This can be illustrated by E. Dunajev's (Dunajevas, 2009) insight into the interface between social service system and the development and transformations of the societies, which leads to the system of social services, and, simultaneously, to the changes in the structure of the welfare state, which was labelled by the author as 'welfare pluralism'. V. Smalskys (2005), discussing the social public policies in the context of the welfare state, presents them as a social policy in the broad sense, which includes the following sub-systems: labour employment and social welfare policy, pension policy, and family policy. According to the scientist, such a way of broader social policy analysis is typical to European continental tradition, assuming that the mission of the welfare state is based on the performance in specified directions. It is important in this context to take into account R. Jančaitytė's (2004) conclusion on the research about family policies in welfare states that the distribution of the countries into models in accordance with certain peculiarities helps to highlight the common features inside of the model and differences among the models, as well as their strengths and weaknesses, which, in in turn, allows searching for the most appropriate family policy system in Lithuania. M. Skuodis, citing M. Arcanjo (2006), argues that, in a broad sense, the model of social policy, or a general welfare state regime can be defined as the ways in which welfare creation is distributed among the state, market, and household (Skuodis, 2009). This concept includes the totality of the government's social policy and its impact on public welfare. M. Skuodis (2009) emphasizes that in addition to the so-called, identified by G. Esping-Andersen, three ideal welfare state regime typology (liberal, conservative-corporate, and socio-democratic), other authors also distinguish the fourth model, i.e. embryonic (southern), and present ideas for the fifth model, i.e. the ex-communist model. It is important to note in this context that the work group of Lithuanian researchers and experts developed a project in 2015 for a new social policy model that integrates various changes in the social life and activities of the Labour Code (Darbo santykių..., 2015). In summary it can be said that the institutional framework providing the welfare of society is directly linked to education, including its all levels. However, does it satisfy the needs of the members of the society and provide social justice in education

Social justice can be presented as a normative concept that characterizes the social situation as a fair, consistent with human nature and rights (Leonavičius, 1993, 230). Often this is related to the obligations of the state to its citizens, that provide them with a certain minimum level of welfare, and such states are seen as welfare states (Aidukaitė, Bogdanova, Guogis 2012, 16). The Constitution of the Republic of Lithuania (Lietuvos Respublikos Konstitucija, 2013, 8) legitimizes the commitments of the state to

its citizens as regards their training and education in various formal education institutions. Nevertheless, the reports in the public domain and the research of scientists reveal the transformations of the education situation, which can be attributed to the lack of social justice. To validate the relevance of this topic, the article discusses the following: the principles of social justice system (Bieliauskaitė, 2009), the accessibility to education and social justice in Lithuanian schools (Iljina 2014; Lazutka, Navickas, 2010; Trakšelys, 2015), the measurement of educational justice, and the reform of higher education and justice (Purvaneckienė, Čiužaitė, 2010). As regards the principles of social justice in the context of different paradigms, J. Bieliauskaitė concludes: 'Every person shall have the same scheme of fundamental rights and freedom, which is consistent with the rights and freedom of other persons and which on the basis of equal political rights would guarantee their equal value' (Bieliauskaitė, 2009, 133). The scientist emphasizes that in the situation of initial equality when the society distributes the overall resources (in developing and implementing a variety of social assistance and welfare schemes), the person shall be entitled the right to a share of the stocks, which corresponds to a reasoned lifestyle choice (Bieliauskaitė, 2009). Applying these insights to education, it can be assumed that the state should provide support to those members of the society who are motivated to seek knowledge, professional competence or research skills relevant to education and academic institutions. With reference to B. Bitinas (2011), K. Trakšelys definēs the accessibility to education not solely as the existence of the establishment providing general education, but also as its ability to meet the needs of various education stakeholders and general public (Trakšelys, 2015). Therefore, the accessibility to education is generally understood as access to educational services provided by the state. According to G. Purvaneckienė and G. Čiužaitė (2010), there is no single definition of justice in education, the scholars representing various approaches define it differently, yet, a number of countries are trying to measure it. O. Iljina (2014), who researched the perception of social justice in Lithuanian schools, revealed a fairly subjective perception of social justice by the school community members (administration members, teachers, students, parents, and other). The latter stated that social justice is a sufficiently unclear concept that should be related to justice, equality, tolerance, equality of treatment of all the principles, but rather, it is in their feelings, interpretation of expectations, interpretation, rather than an actual experience. Considering the fact that in research the perception of social justice is formed through personal participant experience, it can be assumed, it is important to properly select research indicators in the research of social justice in education so that the individual perception does not distort the content and esence of the conception of social justice. The field of social justice in education is complemented by the research of R. Lazutka and J. Navickė (2010). According to the research data of the Department of Statistics under the Lithuanian Republic Government of household budget survey in 2008, the authors of the social justice research limited themselves to the research of two aspects: the accessibility to studies and the distribution of the benefits of studies between the sexes. In order to assess the availability of the studies, the index of the accessibility to higher education was estimated: the latter determines to what extent the participation in the system of higher education is determined by the belonging of a person to a particular social group. Summing up the results of the study, R. Lazutka ir J. Navickė claim that further research of social justice in higher education could be directed towards the diferences of benefit distribution among the people with higher education attainment from different social backgrounds. In the opinion of the researchers it is also important to assess the accessibility to the prestigious high schools and study programmes for the representatives from different social sectors (Lazutka, Navickė, 2010). Lithuanian and foreign scientists went deep into the experience of welfare states in the process of implementation and assessment of social justice in education. J. Aidukaitė (2010), regarding the experience of Sweden, Scotland and Germany, stressed that, despite the requirements of the EU to comply with the same requirements of the education system, the countries also raise specificē requirements for the system of education. That depends on the level of the development, the peculiarities of social policy, the political priorities of the countries, and the overall welfare of a country (employability, social inequality, poverty, and etc.) also determinēs the implementation of the objectives raised for the system of education and the existing gaps in the field. R. Dapkūnaitė (2014), discussing the concept of the state of poverty and welfare problems, in the case of Cambodia, presents the question - perhaps the welfare state not only influences, but also creates the poverty? According to her, poverty is one of the most important indicators that describe the person's lifestyle, his position and posture, and because they have the economic and cultural backgrounds, paves the way for the emergence of social classes (Dapkūnaitė, 2014). The transfer of these insights into the space of Lithuanian problematics and relating them to other other scientific

research leads to the assumption that this provides individuals with the inequalities in meeting their needs in education. Lithuania can benefit a lot from the experience of foreign countries in its pursue of social justice in education, search of links between social and education policy in the advanced industrialized societies (Arnesen, Lundahl, 2006; Hega, Hokenmaier, 2002*). In summary of the analysis of the research it could be claimed that the research conducted by the individual or groups of scientists highlight the manifestations of social justice in education and the assumptions of social injustice as regards the aspects under investigation in the context of the welfare state conception. The above mentioned research is based on the individual research methodology and individual sets of indicators, so that the latter social justice in education assessment methodology can be identified as individual.*

The content analysis of the scientific study, prepared by a group of scientists, on the assessment of social justice in education. One of the principles in the system of Lithuanian education is the principle of equal opportunities that defines social justice in education in essence: *'The education system is socially fair, it ensures the realization of individual rights, it guarantees access to education for each person, the attainment of general education and a primary qualification level, and creates conditions for further development of the qualification or to acquire a new one.'* (Lietuvos Respublikos…, 2011). Yet, contemporary multicultural societies are confronted with various challenges of our time as regards the implementation of social justice in education. Despite the welfare state concept and the diversity of models and opinions on what social justice in education is significant efforts of countries to find the system of objective indicators to measure justice in education have been noticeable. Scientific works that best reflect the problems of the situation and its manifestations in Lithuania have been chosen for the assessment of social justice research methodologies in education. One of these works is a scientific study developed by a group of scientists that covers theoretical concept and practical assessment of social justice in education (Žalimienė, Lazutka, 2011). The discussion in the present article about the assessment methodology of social justice in education focuses on the following: the basis of assessment methodology design (the basic principles of a theoretical perspective have been applied); the content of assessment methodology (the groups of indicators have been chosen); the employment of assessment methodology (by describing the state of social justice in the Lithuanian education system in the selected period).

In the process of the construction of social justice in education assessment methodology, the authors were not limited by any one theoretical perspective, but combined the principals to ensure formal and distributive justice, and simultaneously related social justice to the implementation of the main principles in education. The authors chose the following periodically updated main data sources: the database of Household Budget Survey at the Lithuanian Department of Statistics, and other data of the Department; the data of ICT Education Management Information System at Lithuanian Ministry of Education; the data of periodic PISA and PIRLS international surveys of student achievement. The education system is diverse, thus, the assessment of social justice in education requires the system of indicators that reflects the complexity of this phenomenon. The groups of indicators and their contents are shown in Table 1.

The interpretation of the indicators in Table 1 is as follows: the indicators of the *education context*-social, cultural, political - may have an impact on the changes and interpretation of social justice indictors. The indicators of the *education process* reflect the conditions of this process. The indicators of the *education outcomes* describe the level of participation in education and its outcomes. The indicators of the *education effect* reflect the social and economic effects of educational inequalities. *Simple statistical indicators* are derived directly by using the statistical information presented in various sources or by carrying out the estimates on the basis of this statistical information. *Indices* are the indices of social justice of the individual educational levels as integrated micro-level indicators, which connect personal involvement in the education system with his/family social/economic characteristics. E. g., the Gini Index reflects the inequality in education. *Macro-level indicators* describe the situation on the level of the country, region, or local municipality. *Micro-level indicators* characterize the situation on the individual or household level. The discussed system of indicators of social justice in education and the methodology of their calculation were applied during the process of the social justice state analysis in 2007 - 2008 (Žalimienė, Lazutka, 2011, 66-78). *In summary it can be said that the assessment methodology of social justice in education integrates a variety of indicators reflecting the multiplicity*

of the phenomenon; thus, it can be identified as complex. The scientists doing research on the separate aspects of social justice in education usually develop the methods of individual research.

Table 1

The groups of social justice indictors in education (according to Žalimienė, Lazutka, 2011)

No.	The Group of Indicators	The Content of the Indicator Group/ Indicators
1.	The indicators for separate principles of social justice	Equal opportunities; affordability; variety of choice; compensation
2.	The indicators for separate levels of education	Pre-school education; general education; higher education; non-formal education (children education and adult education - separately)
3.	The indicators from the point of view of education system functioning	The indicators of the context of education, the process of education, the outcomes of education, the aftereffects of education
4.	The indicators according to the nature of information	Objective and subjective indicators
5.	The indicators according to the peculiarities of calculation	Simple statistical indicators and indices
6.	The indicators according to the content of information used	Macro-level and micro-level indicators

The discussion of the research and assessment methodologies regarding the access to higher education. The systematized indicators of assessment of social justice in education (Table 1) allows choosing a certain range of indicators for further research or adapting the existing methodology to achieve the aims of the research by integrating a variety of indicators. The Lithuanian Science and Higher Education Monitoring and Analysis Centre (MOSTA), presenting key statistics and inquiry-based data on the studies in Lithuania, examines additionally the so-called social dimension of higher education, i.e. the access to higher education (Aleksandravičiūtė, Jakštys, 2014). The access to higher education for all groups is examined in the light of the possibilities of different social groups to access higher education, to study and to complete the chosen programme of study. Assessing the accessibility to higher education MOSTA took into account the fact whether the access to higher education is limited by sex, age, language, or where secondary education was acquired, parents' education, financial capacity, disability leading to special needs, and etc. Given this view, the assessment indicators of access to higher education (social dimension) can be related to the individual groups of indicators presented in Table 1: the indicators of equal opportunities, educational context and process statistical information and opinion based, and mostly the macro-level indicators. The MOSTA publication says that the purpose of social dimension in higher education is social justice, which aims at creating access to higher education for those seeking higher education, allow to study, to apply the results of the research not only to every member of the society, but also to marginalized social groups, to any member of the society in a socially sensitive position and corresponding to the requirements of the higher education system (Aleksandravičiūtė, Jakštys, 2014, 138). Therefore, the Lithuanian Science and Studies Monitoring Centre analysis the accessibility to higher education in the light of the fact whether there is a proportion in Lithuanian higher education of the representatives from the groups that have a decreased access to higher education has decreased due to the indicators (ethnic, racial, economic, social, and etc.), which distinguish the groups from the other: people of all ages; both men and women; people with disabilities; people who have completed secondary education in Russian or Polish; individuals with various socio-economic status and financial capacity. This makes the basis of the accessibility to to higher education (social dimension) investigated by the MOSTA. One more MOSTA research regarding the access to higher education focused on people with disabilities should be noted (Aukštojo mokslo...,2014). The peculiarities of the methodology of this research are the following: the qualitative nature of the research,

a semi-structured interview method, 33 people with disabilities as selected informants, and the sample integrates pupils, students and graduates. The research was carried out in 2014, in Lithuania. The interview questionnaire covered three main topics, i.e. the enrolment in higher education, the studies, and the studies completion and transition to the labour market. The questions specifying the topic covered the following: the provisions to studies; the motives for the selection of higher education institution / high school / study programme; the availability of high school; its environmental adaptation for the disabled; the acceptability of the study process organization; the relationship with the academic community; public attitudes towards people with disabilities who study; the possibilities of studies continuity; employment opportunities in accordance with the profession; the relationships with the employer; and etc. The situation of accessibility to education in Europe, including Lithuania, is also analysed by the foreign experts (Peer Learning ..., 2015; The European Higher ..., 2015). This is what Lithuanian researchers take into account while shaping the methodologies of the research of similar aspect and assessing the situation and manifestations of social justice / education accessibility ("social dimension") in Lithuania. *In summary it can be claimed that the research and assessment methodologies of social justice in education and access to education integrate the indicators employed by various Lithuanian and foreign researchers in analogous studies. Science and Education Monitoring Centre (MOSTA) carries out such investigations systematically simultaneously with the overview of the Lithuanian Studies on the basis of the experience in foreign countries, and examines the social dimension in education. This research is more of an applied nature.*

The classification of research methodologies, carried out by individual or group researchers, on welfare state and social justice in education is provided in Figure 2 (Figure 2).
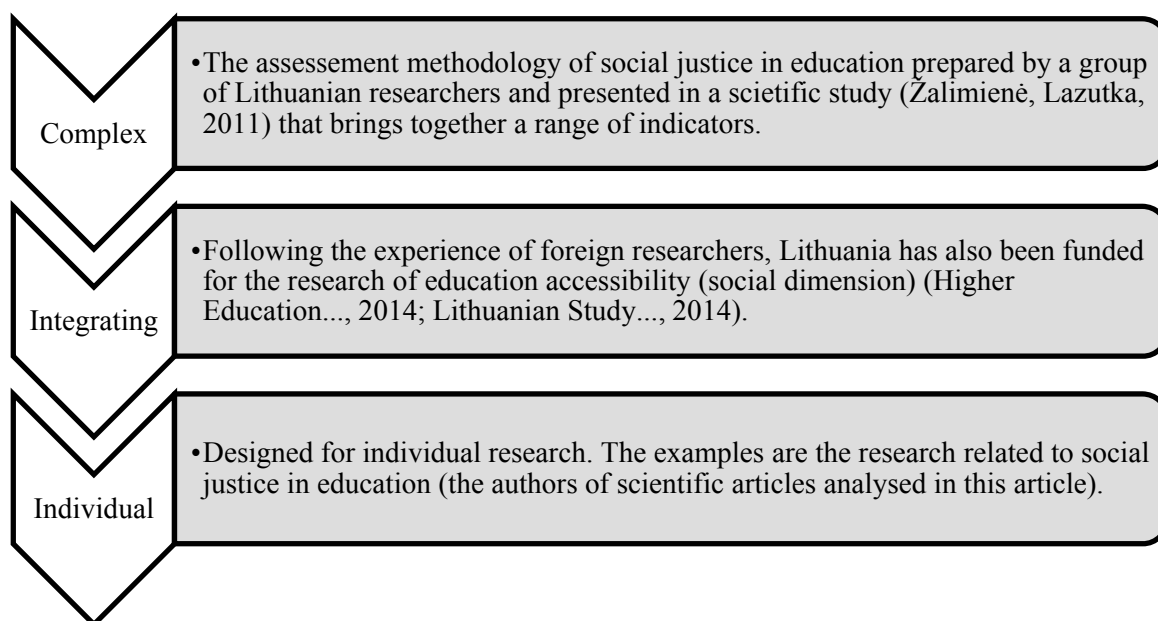
Figure 2. The peculiarities of research/assessment methodologies of social justice in education.

In summary it can be said that the research of social justice in education is an important trend for the analysis of the state of education in countries and Lithuania. Given their impact on not only the development of education, but also to the 'cohabitation' of the members of the society, their welfare and the perception of their own value, the research in this domain should proceed systematically, and improve the existing and develop new research/assessment methodologies of social justice in education.

Conclusions

Regardless of the fact that social justice in social life is declared as a norm, however, unequal possibilities for the members of the society or individual groups as regards access to education become apparent for various reasons. This is particularly relevant to the development of multicultural societies and the transformations in the structures of population. Therefore, social justice in education in the

context of welfare state conception and other related issues are the subjects relevant to the scientific research.

The theoretical analysis of the problem has revealed its topicality, has highlighted the diversity of the concept of social justice in education in the context of welfare state conception, and has based the need for continuous research and assessment of this phenomenon.

The content analysis of the assessment methodologies of social justice (social dimension) in education revealed the performance of these instruments and their limitations. Complex and integrating various indicators methodology can be applied for the holistic research of the phenomenon of social justice at national or regional level. Meanwhile individual surveys are based on a research methodology and a set of individual indicators prepared for a specific research. Social justice in education and access to education research and assessment methodologies, applied by the Science and Education Monitoring Centre (MOSTA), integrate various indicators employed in the analogous research by Lithuanian and foreign scientists.

It can be argued that further, more systematic, knowledge and assessment of social justice in education requires continuous monitoring of the phenomenon, based on a combination of contextual indicators and phenomenon characteristic objective and subjective indicators. The gathering of some additional information (indicators) that are not included in the current databases or sources, and the research of public opinion on these issues as a component of social justice assessment are also important.

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Teachers' Visual Creativity in Learning Environment

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Abstract: Nowadays a pupil spends most of his time in school environment, this involves different social impulses and many-sided possibilities of obtaining information and it can become a facilitator for learning and acquiring cooperation skills. Environmental impact in all its dimensions – physical, social and informative comes to human's perception visually, audibly, manually. Visual perception is very important as it determines receiver's initial attachment of information, stability and formation of associations. This greatly influences emergence of the first notion and creates interest and facilitates stability of information in memory. Teacher's position and job specifics give many possibilities and bring big challenges for pupils today in maintenance and creation of corresponding learning environment, therefore teacher's professional competencies and visual influence are significant. The aim of the article is to research the essence of teacher's visual creativity and ways in which it can be applied in learning environment. The article analyzes learning environment and its specifics today, teacher's creative competencies and their possibilities in facilitation of learning process. Methodology, in correspondence with the set aim of the research, includes review and analysis of theoretical scientific literature and different sources. The obtained results of the research discover versatility of creativity and explain the concept of "visual creativity', defining its manifestations in the categories of learning environment. Conclusions point to big influence of visual creativity on the development of learning environment and a potential for pupils' achievements in learning.

Key words: environment, learning environment, creativity, visual creativity, school education.

Introduction

The aim of teacher's pedagogical activity in the 21st century is to stimulate humans to fulfill themselves as social human beings, attesting cultural values, and creating environment, in which communities' joint aims are cognized and each person's talent is developed (Starptautiskā conference…, 2013). To reach this aim, United Nations Educational, Scientific and Cultural Organization „UNESCO" has proposed to lay more emphasis on creation of learning environment, which facilitates freedom of humans reasoning, imagination, thinking, feelings, so that person in this environment can develop its talent and could in scope of his possibilities decide and control its life in unforeseen circumstances of the future). Therefore, a person is not a tool of development, but an aim, which has to be reached in learning environment, focusing on the development of each talent and discovery of predisposition. Also in professional standards for teachers (Skolotāja profesijas…, 2004) one of the main duties of the teacher is mentioned - to organize safe and supportive educative environment. There are plenty of studies that testify learning environment as the main professional example for pupils, which contains very a big potential for development of skills but they lack information how it has to be done, especially in connection with "modern" skills (facilitation of talent development, courage to experiment, creativity, ability to express own opinion, independence and other). There is lack of stabile methodology and social experience and traditions have not been developed.

Teacher's creative competency has a determining role in the creation of learning environment. Creativity in organization of learning environment is vital not only in showing professional example and providing the right conditions for pupils to learn appropriately, but also so that adaptation of environment could be at all possible, because without creativity a person cannot adapt to environment, not to adapt environment in correspondence with own needs. Creativity is important in the change of environment. Intelligence allows humans to adapt to the surrounding environment, but this is closely connected with the activity of the left temporal lobe and at the same time it blocks a large part of creative element, because it is necessary to fall within the system and to make efforts to blend in not to differ and transform, which suppresses creative skills. Whereas ability to change the surrounding environment – adaptation to own needs (imagination and realization) involves high creative component (Sternberg, 2006).

Today pupils in school still have problems with achievements in learning, they have low motivation for learning. Learning environment is significant in facilitating pupil's positive emotion and motivation to learn. Pupils not always like to be in school or class, and this significantly influences pupils' interest and wish to learn. Teacher is the organizer and leader of learning process, he has to look for new possibilities how to create learning environment that pupils would like and that would motivate them to learn. Therefore, it is important for a teacher to develop competency and new skills. Creativity is one of these skills. Creativity as productive activity, in comparison to reproductive activity (delivery of information, fixation, maintenance), can give innovatory and new results, which makes investment and determines success in many practical aspects of life, culture, education, production.

Creative skills and their implementation have been widely researched by (Black, Harrison, 2002; Briška, 2014; Cooper, McIntyre, 1993; Creativity, find…, 2004); C. Cullingford (2007); J. Rudduck, D. Arnot (2003) etc., but creative skills are still not self-evident in every day practice in schools today (Briška, 2014). Studies about teachers' creative competencies can be found more rarely. Professional standards for teachers and mass media widely state creativity as a very important factor, but there is no information how to use creativity in learning environment and how to make environment and teachers' job more corresponding to pupils' needs.

Teacher's visual creativity in the research is viewed as a possible solution for creation of modern learning environment. Visual creativity has been researched in many fields, and our modern era is described as „the era of visual generation", „linguistic transition to visual", „dominance of visual technology". From various scientific studies (Bebre, 2011; Black, Harrison, 2002; Carey 2008; Delors, 2001; Lubart, Sternberg, 1995; Sternberg, 2006; Vidnere, 2011) it can be concluded that visual creativity is necessary to build creative learning environment, which would facilitate to reach achievements, but it is not scientifically grounded up to this moment and is connected with pedagogical context, therefore the aim of the research is: to research the essence of teacher's visual creativity and possibilities of its use in learning environment. The research question is as follows: what are possibilities for use of teacher's visual creativity in learning environment?

Methodology

 Scientifically theoretical grounding of the research involves authors' works about creativity and learning environment. (Bebre, 2011; Briška, 2014; Carey 2008; De Bono, 2009; Holzkamp, 1983; The Routledge International…, 2013; Advances in educational…, 1974; Delors, 2001; Lubart, Sternberg, 1995; Mendelsohn 1976; Miķelsone, 2000; Šūmane, 2012; Tainena, 2008; Vidnere, 2011; Wiater, 2002; Zimmer, 2005.).

This research has been started in spring 2014 there has been made a potential research of learning environment in connection with creativity. Most recent scientific researches in the context of learning environment were synthesized in autumn 2015, when there was analyzed and integrated also the main focus of research – visual creativity. During the research, it was ascertained that there is no information about manifestations of visual creativity in school – learning environment, although visual communication has become dominant disclosure of information nowadays. In research there has been used the method of content analysis, which is suitable for big scope of parallel (different branches) information compression and categorization in result to get classified and synthesized information, which could be included in unified system and to state its mutual influence and function from pedagogical point of view. The method of content analysis is grounded by the specifics of the research problem, theoretical statements in the methodology of pedagogics, use of existing knowledge in social science and humanities. There was selected as valid this part of sources for the research, which allows to unite the obtained results in knowledge and practice research, and to synthesize them into mutually supportive system, which corresponds to the object of research and problematic, as the research for the science of pedagogy notifies new arc of research – visual creativity as a part of current learning environment. The results of the research are generalized, but examples are described in the context of Latvia.

Results and Discussion

Creativity in science and in different other its branches are defined differently, but notwithstanding the branch, creativity is connected with creative work, which involves original and valuable categories, therefore as content root of the concept of creativity is considered – creation of something new and valuable. In this research the essence of creativity is viewed from the position of recipient (receiver), placing an emphasis on visual type of creativity. This view does not contravene with other research theories of creativity and descriptive structure, but it supplements and offers new aspects of creativity research, which is very important in the context of pedagogy.

In scientific literature, learning environment is viewed as three-dimension mutual interaction, which influences individual and at the same time, it is influenced from the individual. Collecting authors' statements about environment (Bebre,2011; Plucker, Beghetto, 2004; De Bono, 2011; Holzkamp, 1983; Advances in educational…, 1974; Lieģiniece, 2012; Lubart, Sternberg, 1995; Mendelsohn 1976; Miķelsone, 2000; Pedagoģijas terminu…, 2000; Sternberg, 2006; Šūmane, 2012; Tainena, 2008; Vidnere, 2011; Vides zinību…, 1999; Wiater, 2002; Zimmer, 2005; Ясвин, 2001) was created schematic image of learning environment (Figure 1).
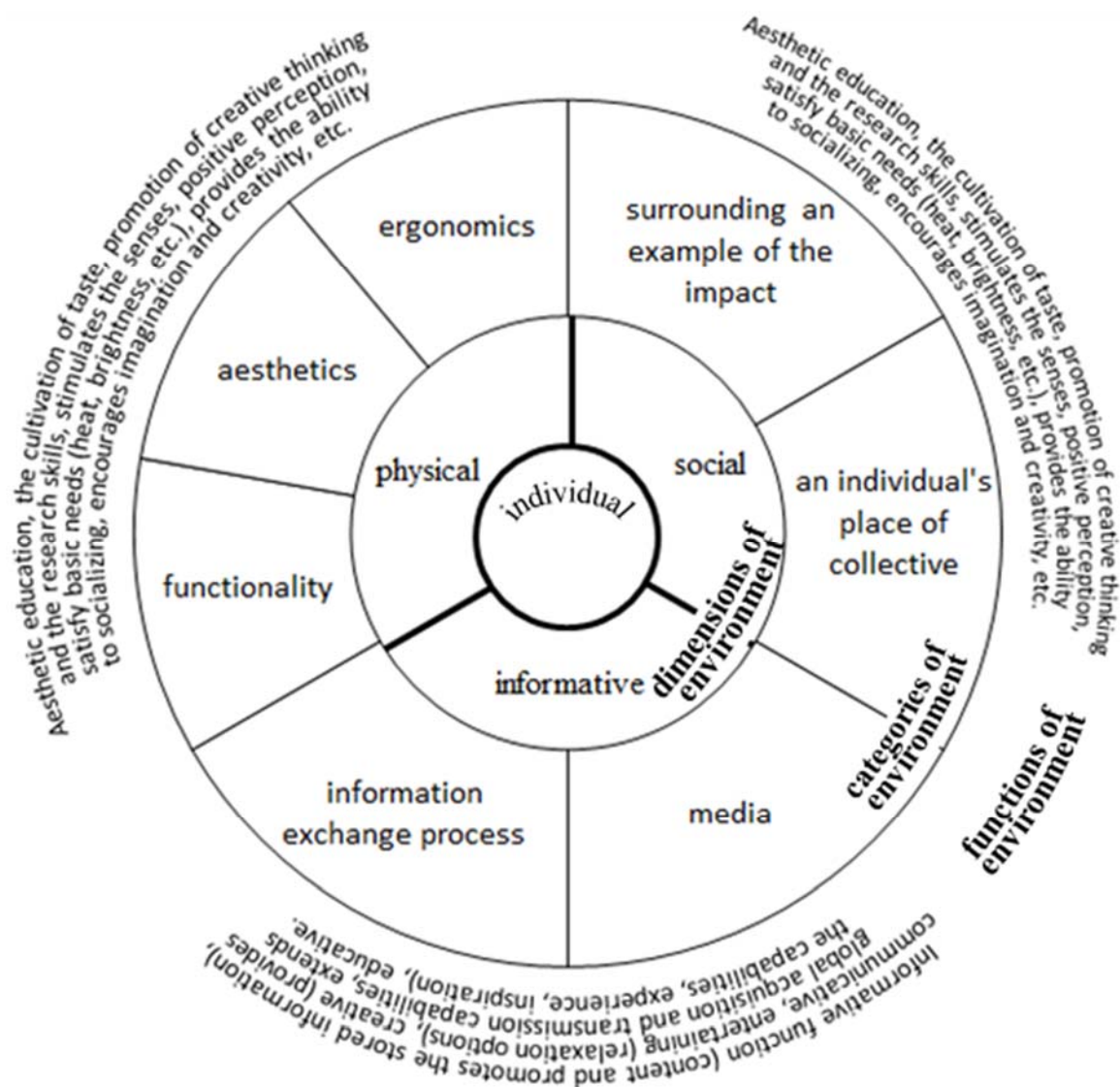
Figure 1. Interaction of environment.

Individual is in environment, which is described by environment, body of external conditions – both spatially physical environment (room, temperature, objects) and social environment (classmates, communication, others' opinion, family values, atmosphere), informative environment (different sources of information, teaching aids, technical means). Dimensions of environment are mutually connected – they influence each other and are influenced both from individual and mutually. Environmental categories describe the essence of each environmental category, which in reality is the result of mutual influence, therefore they are not precisely divided as a part of specific dimension (for example, the space of room influences functionality of physical environment and ergonomics depending on the amount of people in the room and the space of room influences physical well-being (intimate distance, security, etc.) and human relationships – social functions change). This process cannot be separated from the specific environment and conditions, in which it takes place, therefore achievements and development in this spheres is closely connected with environment and mutual influence and also the specific functions of environment are relative (depending on many conditions and specific situation), thus also creative manifestations in the corresponding environment are ambivalent. Teacher in this scheme of environment (Figure 1.), from the point of view of pupil's learning environment at the same time is the element of social environment and at the same time is also one of the main influencing factors of all dimensions of environment.

The concept of visual perception has become well known comparatively recently (21st century), when plethora of information, marketing, haste and repletion very much determine human's ability to perceive and to sort information, therefore exactly visual type of information, which in the shortest time gives the biggest amount of information (in contrast to audial or kinetic perception) (Carey, 2008). Visual creativity is understood with such creative manifestations, which are perceived with sight. „Visual", possible to be seen, easily seen or understandable", this is something connected with sight; perceived with sight (Farlex, 2015; Science Dictionary 2015; Akadēmiskā terminu…, 2015; Vocabulary, 2015). In the visual definition included „easily understandable" precisely describes also our current means of communication in this global era of communication – quick, easily surveyed and perceived means of communication, which allows quickly to perceive, find and give information – in visual way. With this can be understood, that physical material urgency is essentially diminished, as well as practicality of long written texts, human perception has been reduced to perception of flowing, big and digital information (Carey, 2008). Nowadays information in technologies is quickly and easily accessible everywhere, but its scope essentially surpasses borders of human's perception, therefore more vital becomes especially sorting of information, "diagonal reading" and visual perception. Quickly spreads use of video tutorials, applications and photos in delivery of information without wide use of words (The Routledge International…, 2013).

Visual material, its essence and connection with human's perception, is viewed connecting it with the specifics of certain branch, environment and context. In education and pedagogy, this mainly has to be understood as learning environment in school. Basing on scientific analysis about the essence of visual creativity, teachers' creativity and learning environment (Bebre, 2011; Black, Harrison, 2002; Carey, 2008; Briška, 2014; Cooper,McIntyre,1993; De Bono, 2011; De Bono, 2009; The Routledge International…, 2013; Advances in educational…, 1974; Landau, 2007; Delors, 2001; Lieģeniece, 1999; Lubart, Sternberg, 1995; Akadēmiskā terminu…, 2015; Miķelsone, 2000; Rudduck, Arnot, 2003; Science Dictionary, 2015; Sternberg, 2006; Šūmane, 2012; Tainena, 2008; Vides zinību…, 1999; Vidnere, 2011) There is created a figure (Figure 2), where are gathered indicators of manifestations of visual creativity, correspondingly to each dimension of environment – social, physical and informative in learning environment.
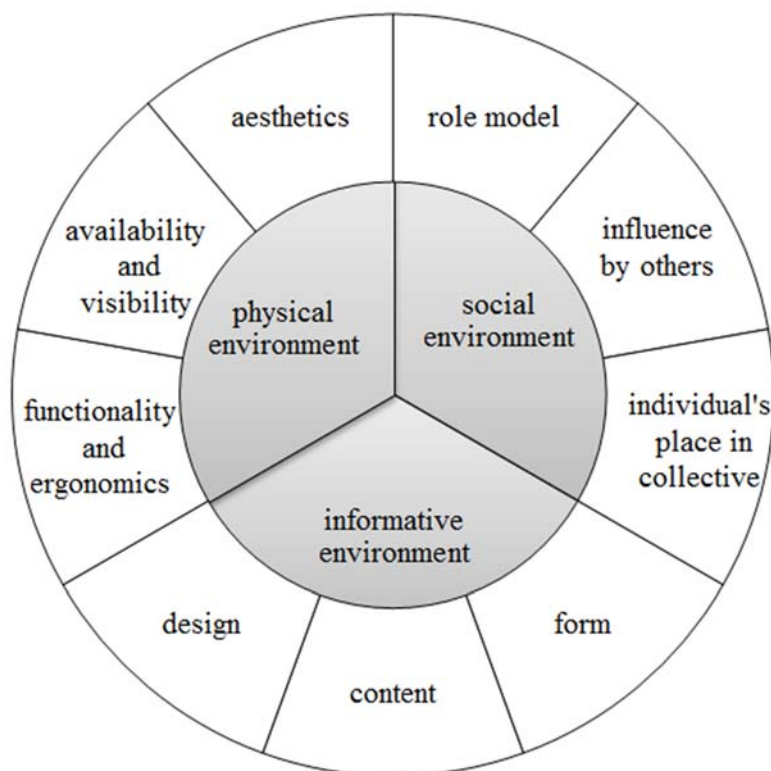
Figure 2. Visual indicators of physical, informative and social learning environment.

Physical environment (environment of objects) involves visual indicators: functionality and ergonomics; availability and visibility; aesthetics of physical environment. Functionality and ergonomics in teacher's visual creativity reflects as sense of learning environment subject and convenience, location, corresponding size, number, without excessive details, adjustability of necessary equipment to work. Elimination of excessive objects, taking into account factors of pollution, distraction of attention. For example, to make arrangement of desks in classroom adapting them to task – group works with desks put together, groups for exchanging ideas – chairs around the room. Availability and visibly in teacher's visual creativity is reflected as environment of objects, which does not lack material means that are necessary for developing, research and creative works. This is inventory for doing the task and elements of environment of objects, which helps, stimulates to developing activity and makes attitude to them and at the same time environment does not contain many excessive and disturbing objects and there is easy access to objects and clear system. For example, a dustbin can be bright and big, placed in visible and constant place, so that use of it would not require much time and energy, at the same time maintaining cleaner environment from excessive waste. Aesthetics of physical environment is reflected in general decoration of rooms and objects in interior (form, color, size, etc.), attraction and visual correspondence to subject (atmosphere) and their function. For example, it is not advisable to use visually old objects, if there is aim to rouse interest in pupils and to make them like a particular topic – new books, clean table cleaning cloths, etc.

Social environment includes visual indicators: role model, influence of others and individual's place in collective. Role model (example) is one of teacher's manifestations of visual creativity, example and presence, culture, experience, mutual relationship models, behavior, also mutual help, cooperation, conflicts, institutions and groups, what person indeed faces. Teacher influences also as a representative of profession, a standard of mentoring, gender education and other, an example, a creator of alternative and a conception of pattern. Visual looks (tidiness, choice of clothes and accessories and suitability, comfort, stereotypically) and behavior, makes impression and it is a professional example. For example, in the situation of learning environment, teacher demonstrates attitude of a responsible and educated person with looks, for example, with clean outfit, formal outfit in festive events. Influence of others in teachers' visual creativity is connected with the fact that pupils have high sensitivity of motivation towards social environment, therefore teacher, making conditions of visual environment, can stimulate

or distance mutual influence of pupils and attitude towards generally accepted norms and stereotypes. Teacher can influence this with different visual aids putting limits to tasks, arranging classroom, giving possibility to do work separately from others, planning contents of tasks and information, form, ergonomics, accessibility of resources and other, influence contact with other people and pupils, influence wish to act differently or similarly. For example, arranging chairs in classroom separately or putting them together, providing versatile accessible materials it is possible to reduce number of similar solutions of tasks and comparison of ideas with others. Individual's place in collective – pupil's social position and social functions (need for love, security, new recognition, responsibility, independence, transparency and connection and other), are influenced through different environmental visual conditions. Limits of tasks, arrangement of class interior, content of tasks and information, form, ergonomics, accessibility of resources and other influence pupil's social position, contact with others and mutual influence. In learning environment it is implemented, for example, influencing the use of auxiliary means in the task (for example, two pupils have one scissors, or pupils have to divide in teams so that each has a photo camera) facilitates pupils' mutual cooperation.

Informative environment (system of symbolic meanings) involves criteria of visual creativity: forms of information sources, content of information, design of visual information. Teachers' criterion of visual creativity - form of information sources includes inspiring, versatile (text, rhyme, picture, three dimensional models, map, board, video, photos, asociograms, posters, books, slogans, internet, presentations, magazines, through game, activity, riddle, etc.), logical and visual, containing information (temporarily or fixing and in what format). It can be manifested in learning environment, for example, in biology lesson; learning parts of flower, real flowers are used, which pupils have to divide into parts: stamens, pistil, petals, etc. Content of information sources in teachers' visual creativity are characterized as choice of posters, books, magazines, possibilities of internet use, video, three dimensional models and other content of information, versatility, conciseness, correspondence to age of auditory and level of knowledge, arousing interest, explaining, remaining in memory, entertaining, popularizing, alignment of picture and text, clarity and visibility. For example, in learning environment content of information has to be combined after marketing principles: an attracting picture, a succinct slogan, a title and key words etc. Design of information in teacher's visual creativity manifests as clear, logical, arousing interest, without disturbing details (defects, saturation), aesthetic, different (color, form, memory), alignment of text and picture of other types of information, composition of colors, forms, lines and rhythm and consistency of associations, use of signs, symbols, associagrams. "Catch" of attention plays important role in learning environment – to arouse interest to look deeper, therefore in decoration there are important such principles surprise with color, form, text or, for example, exaggeration, enlargement, decrease, abstraction, simplification or combining necessary information with other branch, making provocative slogans, symbols and other.

Drawing on environmental visual indicators, it is possible to analyze, describe and organize teachers' visual creativity, adapting to each indicator new, original and valuable performance in one or several positions in pedagogical activity in certain environment (what in some conditions is new, this in other conditions can be every day practice). In teacher's creative manifestations can be used many strategies and programmes in performance of these indicators, which creativity is relative depending on specific environment , therefore analyzing or organizing creativity, it is important to look at indicators of learning in specific context and situation.

Conclusions

Communication type of 21st century, development of technology and fast lifestyle is determined as dominant visual communication type and many researchers stresses this era as transition from linguistic to visual – to the approach based on pictures. Organizing modern learning environment, where pupils reach achievements, teacher has to take into account such "visual generation's" peculiarities of perception as perception of color and form, conciseness, arousal of interest, shocking, versatility of forms, different marketing principles and other. Therefore, manifestations of teacher's creativity for conditions of specific environment. Learning environment determines 3-dimenion environment mutual influence – social, physical and informative. According to components of environment dimensions,

there have to be adapted descriptive indicators of visual creativity, after which it is possible to analyze, plan and realize teacher's visual creativity in school.

Visual indicators describing physical environment: functionality and ergonomics, accessibility and visibility, aesthetics. Visual indicators describing informative environment: form, content, design. Visual indicators describing social environment: role model, influence of others, individual's place in collective.

Indicators of visual creativity obtained during the research describe the essence of teachers' visual creativity and reflects its manifestations and possibilities of use in each individual's work depending on certain environment, where it takes place.

Widened use of visual culture characteristics and principles in different branches point to necessity of more detailed and empirical research of visual conditions also in learning environment. Influence of visual creativity also stresses necessity for research of teachers' visual communication and knowledge of visuality in modern context.

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Transferable Competencies of Graduates of Vocational Education: a Retrospective Survey 2007-2014

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Abstract: The paper deals with current issues of education for the development of transferable competencies. The aim is to present the self-view of graduates on acquired transferable competencies and to map out the benefits of studies to develop these competencies. The paper is based on the following methods: (a) retrospective questionnaire, (b) content analysis of curriculum, (c) descriptive statistics. The subjective evaluation is related to the degree of saturation (acquisition) of selected transferable competencies. Competencies which were investigated: (1) Communication in the mother tongue, (2) Communication in foreign languages, (3) Mathematical competence, (4) Work with digital technologies, (5) Learning to learn, (6) Social and civic competence, (7) Sense of initiative and entrepreneurship, (8) Cultural competence. The degree of saturation of transferable competencies was expressed on a five-degree categorical Likert scale as follows: (a) strongly agree, (b) rather agree, (c) I agree partially, (d) rather disagree, (e) strongly disagree. The benefits of studies for the development of transferable competencies were expressed by a five-degree numerical Likert scale from 5 (the highest degree of benefits of studies) to 1 (the lowest degree of benefits of studies) for each of transferable competencies. Respondents consisted of graduates of vocational education of Czech University of Life Sciences Prague. The graduates are representatives of the study program Specialization in Pedagogy, who successfully completed their studies in 2007-2014. Thus, the survey maps the period 2007-2014 using a retrospective questionnaire. Specific subjects that contribute to the development of transferable competencies have been identified on the basis of content analysis of the professional curriculum. The results show that graduates perceive competencies 1, 3, 4, 5, 6 and 8 as sufficient, namely at the degree of saturation "rather agree". The exception is a foreign language competence (no. 2). The graduates can see the highest degree of benefits of their studies in the development of competencies no. 4, 5 and 1. The significance of the results is that the empirical data provide evaluation for the optimization of the educational process.

Keywords: transferable competencies, vocational education, retrospective questionnaire, survey.

Introduction

The quality of education is a highly desirable topic in the scientific discourse. Searching and discovering instruments to ensure and measure the quality of education belongs, in addition to the others, to the tasks of evaluation in education. The evaluation approaches are diverse and in our opinion one of the current ways to carry out the evaluation of education is through the development of transferable competencies. Transferable competences are "the generic capabilities which allow people to succeed in a wide range of different tasks and jobs" (Training Agency, 1990, 5). "Transferable skills are important for individuals to enhance their employability, for employers to find qualified and able employees and for the economy that needs highly skilled workforce for economic growth and competitiveness" (Ylonen, 2012, 804).

The paper deals with current issues of education for the development of transferable competencies. Its aim is to present the self-view of graduates on acquired transferable competencies and to map out the benefits of studies to develop such competencies. These aims are also reflected in the objectives and questions of our exploratory survey: (1) *How do graduates perceive their degree of saturation (acquisition) of selected transferable competencies subjectively?* (2) *What is the degree of benefits of studies on the development of such transferable competencies?* The answers to these questions which are the result of data analysis through descriptive statistics are given in the text of this paper.

Firstly, the design of the exploratory survey will be presented followed by the description of particular questionnaire items and the variability range of responses. On the basis of formulated criteria the content

analysis of curriculum of two teaching fields of study will be carried out. Then, the data obtained will be analyzed and interpreted in the dimension of the degree of saturation of transferable competencies and the degree of benefits of studies on the development of these competencies through a subjective self-view of the graduates. The obtained results then enable to optimize the educational process in the dual level: (a) in the content level, that is to design an innovation of curriculum of the field of study so as to improve the development of transferable competencies where they show the lack of the development, (b) in the level of performance, i.e. to increase the degree of saturation of transferable competencies as an effort to optimal study outputs.

There are plenty of lists of transferable competencies supported with research findings, e.g., M. Allen (1993); G. Gibbs, C. Rust, A. Jenkins and D. Jacques (1994) etc. In our paper, however, we exclusively focus on the research of transferable competencies related to our educational institution, i.e. the Institute of Education and Communication of the Czech University of Life Sciences Prague. A pilot exploratory survey at a different target group (respondents of a field of the study field "counselling in vocational education" rather than respondents of "teaching") conducted L. Smékalová (2015). The pilot survey contributed to the revision of the range of responses and its items have been implemented in the questionnaire which became one of the outputs of the project entitled "Strengthening the teaching practice in teacher education" funded by the Educational Policies Fund of the Ministry of Education, Youth and Sports. The questionnaire was sent out to graduates who completed their studies in the academic years 2007-2014 and it is an instrument for collecting data in our exploratory survey. After the pilot survey, other specific survey which explored issues of subjective degree of satisfaction with transferable competencies was conducted (Smékalová, Noom, 2015). The survey was conducted among students of the final grades of teacher training (i.e. the 3rd grades) of our institution in comparison with student teachers at the Stoas University of Applied Sciences (in the Netherlands). Here, the list of transferable competencies has been modified based on content analysis according to the most common competencies cited in the documents and research. The mentioned exploratory survey was subsequently extended to include aspects of significance of transferable competencies for the involvement of individuals in the labour market from the perspective of the respondents (note: the paper is under review). The authors strive to obtain valid data that will enable the Institute of Education and Communication to gain deeper insight into the issue of transferable competencies and optimize the educational process significantly.

Methodology

The methodology will be introduced by the design of the exploratory survey reflecting the above mentioned issues, i.e. (1) *How do graduates perceive their degree of saturation (acquisition) of selected transferable competencies subjectively?* (2) *What is the degree of benefits of studies on the development of such transferable competencies?*

Respondents are graduates of combined (distance) form of study of bachelor study programme "Specialization in Pedagogy" in the field of study: (a) *Teaching of vocational subjects*, (b) *Specialization in the practical vocational training*. They are graduates who completed their studies in the academic years 2007-2014. The distribution of the questionnaire was carried out electronically in *Octobe*r and *December 2014*, it means via e-mail addresses which had an impact on the rate of return of the questionnaires. *Selection of the sample of respondents was intentional* and it involved a total of 482 students, 112 students of *Teaching of vocational subjects* and 370 student teachers of *Practical vocational training*. The distribution of the sample of respondents in academic years in the two fields of study was as follows: 8 (2007), 63 (2008), 73 (2009), 82 (2010), 75 (2011), 70 (2012), 60 (2013), 51 (2014). The return of completed questionnaires reached 1/4 (20.53 %), i.e. the participation of 99 respondents. The return rate was influenced by the willingness of graduates to participate in the survey and by the "return" of original e-mail communication due to non-existing e-mail addresses of some graduates. After sorting the data because of the absence of answers to some of the items 63 of 99 (i.e. 63.63 %) valid questionnaires remained. *The final sample consisted of 63 graduates of whom 26 were men and 37 women*.

The questionnaire survey was chosen as the method of data collection. *The questionnaire contained eight items* representing the characteristics of transferable competencies (see the items below).

The characteristic of competencies is based on the interpretation of the European Commission document which deals with the European Reference Frame of key competencies for lifelong learning (The European ..., 2007, 8-15). The text is as follows:

Item no. 1_Communication in the mother tongue: I am able to express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) and to interact creatively, interact linguistically in an appropriate and creative way in a full range of societal and cultural contexts; in education and training, work, home and leisure.

Item no. 2_Communication in foreign languages: I am able to understand, express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal and cultural contexts (in education and training, work, home and leisure) according to one's wants or needs.

Item no. 3_Mathematical competence: I have the ability to develop and apply mathematical thinking to solve problems in various everyday situations. I have the ability and willingness to use these mathematical ways of thinking (logical and spatial thinking) and presentation (formulas, models, figures, charts and diagrams).

Item no. 4_Work with digital technologies: I can use ICT to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the internet.

Item no. 5_Learning to learn: I am able to organise my own learning, including effective management of time and information, both individually and in groups. I am aware of my learning process and needs. I am able to identify available opportunities and to overcome obstacles in order to learn successfully. I am able to gain, process and assimilate new knowledge and skills as well as seeking and making use of guidance.

Item no. 6_Social and civic competence: I have the ability to participate in social (civil) and work life and to solve possible conflicts. I.e. I can show tolerance, empathy, express and understand different viewpoints, to cope with stress, express active and democratic participation in public life.

Item no. 7_Sense of initiative and entrepreneurship: I am able to be initiative, active and innovative. I.e. I am able to turn ideas into action based on creativity, ability to implement novelties, risk-taking, as well as ability to plan and manage projects in order to achieve objectives.

Item no. 8_Cultural competence: I have the ability to recognize the importance of creative expression (of ideas, experiences and emotions) in various forms, including music, performing arts, literature and the visual arts. It means that I have an open attitude to diversity of cultural expressions, and I have an awareness of the local, national and European cultural heritage.

There were two kinds of *answers* to these competencies that included: (a) the degree of saturation (acquisition) of selected transferable competencies, (b) the degree of benefits of studies in the development of transferable competencies. The degree of saturation of transferable competencies was expressed on a five-degree categorical Likert scale as follows: (a) strongly agree, (b) rather agree, (c) I agree partially, (d) rather disagree, (e) strongly disagree. The benefits of studies for the development of transferable competencies were expressed by a five-degree numerical Likert scale from 5 (the highest degree of benefits of studies) to 1 (the lowest degree of benefits of studies) for each of transferable competencies: For easier data analysis of numerical scale we add the following interpretations: (1) lowest degree, (2) small degree, (3) medium degree, (4) higher degree, (5) highest degree.

Another method was *the content analysis of the professional curriculum* of both fields of study. On the basis of the criterion expressing a description of the key competencies particular subjects that allow developing selected transferable competencies were identified using their syllabi. Specific results are provided by the following list of subjects and the relevant competencies.

Communication in the mother tongue is developed by these subjects: (a) Language and Rhetoric Skills; (b) Effective Written Communication; (c) Preparation of Textbooks; (d) Communication Skills;

Communication in foreign languages is developed by the subject: (a) Technical Foreign Language;

Mathematical competence is developed by: (a) The School Management; (b) Evaluation of Education;

Work with digital technologies is developed by the following subjects: (a) Didactic Technique and Technology; (b) Information and Communication Technologies; (c) Learning Management Systems (LMS) in Education; (d) Informatics in Education; (e) Computer in Education; (f) Internet in Education;

Learning to learn is developed by: (a) Pedagogy; (b) Pedagogy of Vocational Education; (c) Psychology for Teachers; (d) Didactics of Vocational Subject; (e) Didactics of Practical Training; (f) Introduction to Andragogy; (g) Introduction to Studies;

Social and civic competence is developed by these subjects: (a) Social Pedagogy; (b) Consultancy; (c) Social Psychology; (d) Pedagogy of Leisure Time; (f) Basics of Special Pedagogy;

Sense of initiative and entrepreneurship is developed by: (a) Introduction to Ecology; (b) Environmental Education;

Cultural competence is developed by the subject: (a) Ethics of Teaching;

The content analysis suggests that some competencies are developed in several subjects, others only in particular ones. Results are interpreted in the following section.

Results and discussion

The results of the exploratory survey are shown in the tables (Table 1 - Table 3) and graphs below (Figure 1 - Figure 2). We note that the respondents reflect *the current degree of saturation with transferable competencies*. Further education or practical experience in the labour market could also contribute to their saturation during their studies and after their completion. The survey deals with combined (distance) form of study respondents. These data are significant to us as they show the extent to which graduates use the mentioned competencies *in the current labour market*. We do not detect saturation of competencies during studies as we would not have received objective data due to the time interval since the time of completion of the studies of respondents.

The exploratory question no. 1 was: *How do graduates perceive their degree of saturation (acquisition) of selected transferable competencies subjectively?* The responses are shown in the table (Table 1) and the graph (Figure 1) below.

Table 1

The degree of saturation of transferable competencies expressed through the degree of agreement with the characteristics of the particular competence

	strongly agree	rather agree	I agree partially	rather disagree	strongly disagree
1 Communication in the mother tongue	21	32	9	1	0
2 Communication in foreign languages	5	14	20	20	4
3 Mathematical competence	10	23	15	15	0
4 Work with digital technologies	24	26	12	1	0
5 Learning to learn	24	29	8	2	0
6 Social and civic competence	28	30	3	2	0
7 Sense of initiative and entrepreneurship	31	26	10	0	0
8 Cultural competence	20	22	18	3	0

The results show that graduates perceive competencies 1, 3, 4, 5, 6 and 8 as sufficient, namely at the degree of saturation "rather agree". The highest degree of saturation (at the level of "strongly agree")

was acquired by the competence no. 7_Sense of initiative and entrepreneurship. Interestingly, the degree of saturation of this competence is better than the degree of saturation of competence no. 1_Communication in the mother tongue. The above mentioned can be explained by the fact that graduates reflect the requirements of the labour market in their practice and with these competencies they contribute to the competitiveness of the organization and thus legitimize their own work position. Competence no. 1_Communication in the mother tongue here does not play such an important role in their job. In the competence no. 2_Communication in foreign languages it can be identified that respondents perceive it as the least saturated one, however, its frequency is divided by the degree of saturation "I agree partially" and "rather disagree" equally. This means that 1/3 of respondents feel this competence as insufficiently saturated while 1/3 of respondents are satisfied with it partially. Here, we believe that the graduates have the language knowledge only at a fundamental level sufficient for the labour market for now. In this context we can highlight the following results of the investigation which dealt with the level of language skills when selecting employees on a sample of two thousand companies in the Czech Republic (Kalenda, Surý, 2013): for some jobs, the requirements for the use of English language are essential but it also revealed that the Czech labour market has not yet been hit by a strong internationalization and therefore the use of English language is not a crucial factor for the employability. The overview of all competencies and the degree of their saturation at all scales are shown by the following graph (Figure 1).
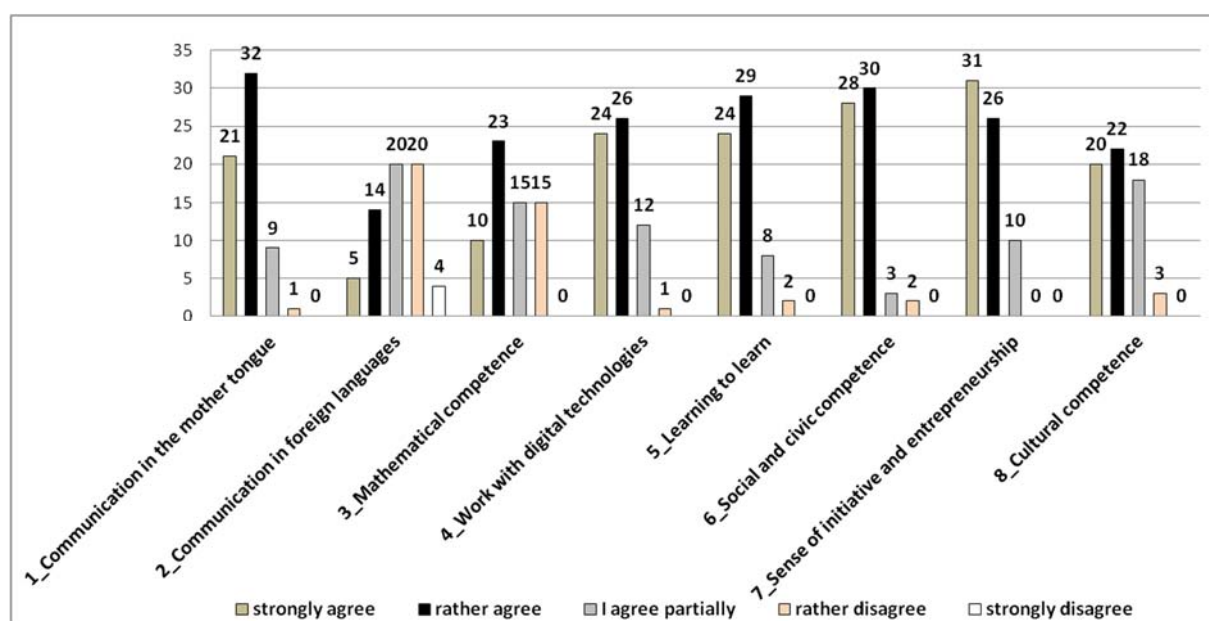
Figure 1. The degree of saturation of competencies at all scales.

Approximately half of the respondents consider themselves to be competent (degree of saturation is sufficient for them) with competencies no. 1_Communication in the mother tongue (32 out of 63), no. 7_Sense of initiative and entrepreneurship (31 out of 63) and no. 6_Social and civic competence (30 out of 63). The degree of saturation "strongly disagree" appears in one competence only, namely in competence no. 2_Communication in foreign languages which was thus rated by 4 graduates. On the scale of saturation "rather disagree" stand above mentioned competence no. 2_Communication in foreign languages (expressed by 1/3 of respondents) and competence no. 3_Mathematical competence (in such way evaluated by 1/4 of respondents). This suggests a question whether the curriculum of the field of study offers enough space for the development of these competencies (see competencies no. 3 and 4). In other words, it will be possible to monitor whether these results will be reflected in relation to the evaluation of benefits of studies on the development of transferable competencies based both on the subjective assessment of the respondents and on the content analysis of the curriculum.

The other exploratory question (question no. 2) was: *What is the degree of benefits of studies on the development of such transferable competencies?* The results are shown in tables (Table 2 and 3) and the graph (Figure 2) below.

We note that the degree of saturation of transferable competencies cannot be compared with the degree of benefits of studies on their development as the role of the development of competencies could also be influenced by other circumstances (e.g. further education, practical experience, etc.). However, it is possible to ask to what extent (see the variability range of responses) respondents subjectively perceive the degree of benefits of studies on the development of selected competencies. Here the curriculum of the field of study itself enters into the evaluation process. It can be found out if there is a relationship between particular transferable competencies and individual subjects of the field of study. This means that we can also compare if there is any connection between the highest degree of benefits of studies in individual competencies and particular subjects of the curriculum which may contribute to the development of these competencies.

Table 2

The degree of benefits of studies on the development of transferable competencies

	lowest degree	small degree	medium degree	higher degree	highest degree
1 Communication in the mother tongue	0	1	11	21	30
2 Communication in foreign languages	6	8	23	19	7
3 Mathematical competence	6	12	14	19	12
4 Work with digital technologies	1	1	7	16	38
5 Learning to learn	1	1	6	21	34
6 Social and civic competence	1	2	6	29	25
7 Sense of initiative and entrepreneurship	1	1	14	29	18
8 Cultural competence	2	2	18	23	18

Table 2 shows that the "lowest degree" of benefits of studies and the "small degree" of benefits of studies are manifested in competencies no. 2_Communication in foreign languages and no. 3_Matematical competence among all of the surveyed competencies. These findings correspond with the content analysis of the curriculum where the development of these competencies involved only one or two subjects taught two hours a week. However, competence no. 2_Communication in foreign languages achieves the highest frequency on the scale "medium degree" and competence no. 3_Matematical competence achieves the highest frequency on the scale "higher degree". The explanation can be that approximately 1/3 of the respondents see the benefits of studies on the development of these competencies more positively because they can better identify individual skills offered by subjects that develop these competencies, however it does not mean that these competencies are developed in the smallest degree among all of the surveyed competencies. The respondents rated the best benefits of studies on the scale "higher degree" in competencies no. 6_Social and civic competence and no. 7_ Sense of initiative and entrepreneurship. Also these competencies have sufficient space for the development through the curriculum of the field of study (see the content analysis). Since the degree of the benefits of studies is divided into five scales we are interested the most in the scale the "highest degree" that relevantly gives evidence about which competencies are rated as the most developed during the studies by the graduates. The results are shown in the following table (Table 3).

In Table 3 there can be seen the frequency of respondents summarized on the scale of the highest level of the benefits of the studies and it highlights the percentage of respondents who rated it in such way. It is possible to get an idea of competencies which are developed the most (see the order of competencies). The competence no. 4_Work with digital technologies was placed in the 1st place (it was chosen by about 60 % of the respondents), in the 2nd place there is the competence no. 5_Learning to learn (chosen by about 54 % of the respondents) and in the 3rd place there is competence no. 1_Communication in the mother tongue (it was chosen by around 48 % of the respondents). The order of shown competencies

completely corresponds with the content analysis of the curriculum where on average up to 5 subjects contribute to their development.

<div align="right">Table 3</div>

The proportion of the highest degree of benefits of studies towards the overall degree of benefits of studies on the development of transferable competencies

	highest degree	number of respondents	propor-tion (%)	order
1_Communication in the mother tongue	30	63	**48**	**3.**
2_Communication in foreign languages	7	63	11	8.
3_Mathematical competence	12	63	19	7.
4_Work with digital technologies	38	63	**60**	**1.**
5_Learning to learn	34	63	**54**	**2.**
6_Social and civic competence	25	63	40	4.
7_Sense of initiative and entrepreneurship	18	63	29	5.-6.
8_Cultural competence	18	63	29	5.-6.

The visualization of these results can be seen in the graph below (Figure 2).
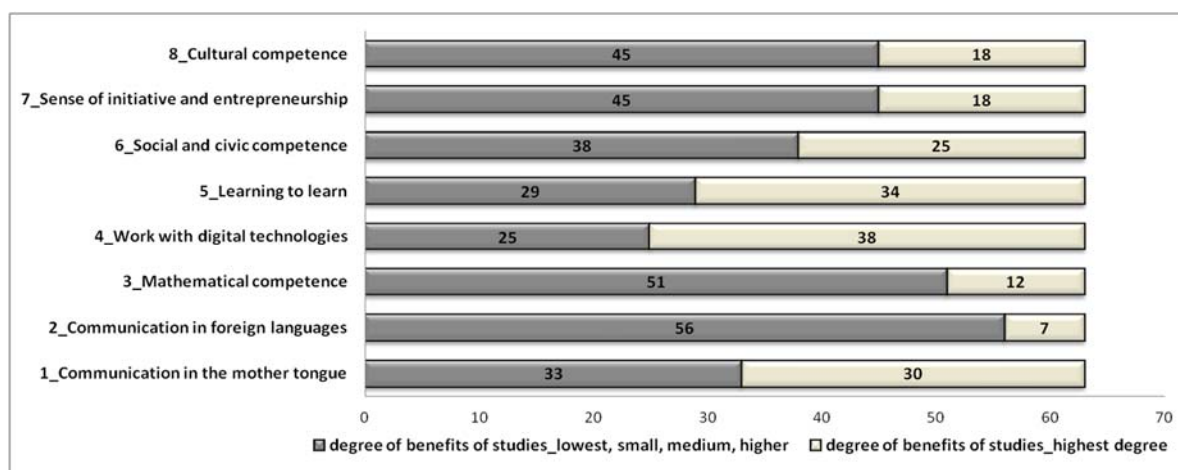
Figure 2. The proportion of the highest degree of benefits of studies towards the overall degree of benefits of studies.

The benefits of studies on the development of competence no. 5_Learning to learn are our biggest surprise. In this context a great influence of Psychology for Teachers, Introduction to Andragogy and didactical subjects on the development of these competencies is evident. These subjects have obviously a great influence on the self-view of participants of the educational process. These subjects become an inspiration to choose own learning strategies of the respondents. The competence no. 5_Learning to learn would deserve further research survey to reveal a deeper context.

Conclusions

The paper answered the 2 questions of the exploratory survey: (1) *How do graduates perceive their degree of saturation (acquisition) of selected transferable competencies subjectively?* (2) *What is the degree of benefits of studies on the development of these transferable competencies?*

The graduates reported that they perceived the highest degree of saturation with competence no. 7_Sense of initiative and entrepreneurship and the lowest degree with competence no. 2_Communication in foreign languages. The other surveyed competencies were viewed as sufficient by the respondents. The graduates perceived the highest degree of benefits of studies on the development of competencies no. 4_Work with digital technologies, no. 5_Learning to learn and no. 1_Communication in the mother

tongue which is in accordance with the content analysis of the curriculum. Simplified we can say that the more subjects are involved in the development of the competence, the higher are the benefits of studies on the development of the competence.

The benefit of studies on the development of competence no. 5_Learning to learn was the biggest surprise for us and we would like to deal with this finding in more detailed attention in the future. The analysis of the empirical data will also contribute to innovation of the curriculum in such way to strengthen the thematic areas that will develop foreign language and mathematical competencies.

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Succession of Fostering Learning Skills in Preschool and School

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Abstract: Succession of fostering learning skills in preschool and school is an important issue nowadays. Studying scientific literature on self-directed learning reveals high importance of cooperation between educator and parents, which is a fundament for development of successive learning skills starting from preschool until graduating secondary school and even further. Educators should be coordinators of productive cooperation between students, family and educators themselves. Teacher creates an environment for positive communication about the best that can help the student to foster initiative, to become independent and responsible in their actions, and point out the benefits of close cooperation between teachers and family. Mutual communication is very important for the establishment of the system of values, decision-making and their evaluation. The aim of the study is to reveal the essence of learning skills starting from preschool and following to school, to research empirically how the succession can be promoted, and to look at a self-directed learning process as a basis for future cooperation between teacher, child and the parents, to promote the initiative. Parents should be aware of learning process in general, to be able to involve and to participate in promoting of initiative and learning skills in cooperation with educators, regardless the age of their children. Methods of the research: study of literature, students' questionnaire.

Keywords: initiative, independence, responsibility, learning, self-directed learning, school education.

Introduction

During first months of life child is fully connected with parents physically and emotionally. Whole environment and the information that child receives are organized by parents. Child learns the world by touching things, listening to voices, seeing parents smile, which is way of natural learning process. By entering the preschool, children come into the new environment in which new information providers are not yet recognized people. One of the preschool's tasks is to help children socialize, learning to cooperate, as well as the acquisition of the new environment-related tasks. This scenario will repeat in a child's life, when starting to attend school and later secondary school. Preschool age children are capable and ready to learn specific, useful knowledge that gives good results, and forms a stable succession of further learning in school.

Parents associating the start of child's learning process with positive emotions and expectations for learning success, however when the schooling process starts, parents are not always sure how to communicate with children on learning issues. A study has been carried out on how the parent-child relationship, in which the parents assume the role of strict control over daily tasks, leave a negative impression on the child's performance. Low effect size of involvement is when parents get involved only in the first few years of school, as well as, if cooperation is limited to participation in school events and parent communication with teachers just about the child's learning results. To reach high effect size of engagement, the parents should actively involve in the learning process.

To promote the children's understanding of common value system, and not to differentiate it between a family and school, like two different worlds, the school should help parents understand the learning process in general. To achieve good learning results, child should be able to control own activities. The above studies by J. Hattie reveal that parents more involve in their children school life from 1 to 3 class, and by the time the intensity of involvement process tends to decrease (Hattie, 2009).

From studies conducted in Latvia on the issue of school councils, there are different views depending on the institutions that carry out the survey. In the survey, carried out by the initiative of the Ministry of Education and Science, in 2012, the majority of respondents admit that the school council is effective enough, and change is not necessary. Association "Latvian parents' movement" in 2012 conducted a study and the survey results show that only 35 % of respondents rated parents representation as an active and effective, 27 % of respondents indicate that representation of parents is not efficient, 1 % expressed

that parental representation is not required, while 19 % say that there is no information about the parents representation in school. In different European countries, school councils deal with various issues. For example, for the issue of schoolwork plans parents have decision-making rights (Denmark, the Netherlands, Finland, and UK), information nature (Norway) or recommendatory nature (Latvia, Lithuania, Estonia). It is noted that school leaders believe that the school gives parents the opportunity to meet individually with teachers and to get to know the school, but parents do not considered these forms of work as effective. The dominant view of parents is to keep the kindergarten principle that parents come to school because starting first grade, parents lose the motivation to come to school (Skolu un pirmsskolu…, 2012).

The article aims to explore the role of the family in a child's learning process, as well as cooperation between educators and family, which could enhance mutual communication and contribute succession of learning skills, when children continue to learn in school and secondary school.

Methodology

Development of pre-school age children's personality is based on the physical, cognitive and psychosocial aspects, and in this process child learns social situation modelling and gains experience (Eriksons, 1998). Craig has formulated the preconditions for motor skills development at preschool age: preparedness, activity, being alert and ability to bring feedback, with the understanding child's specific physical and cognitive development stages (Craig, 2010). At the age of 6 to 7 psychophysical functions such as logical thinking, visual and audial attention, perception and memory, continue to develop. Well-managed learning process can foster the development of all psychophysical functions. At this age the family, social and cultural environment, temperament, mental and physiological development, affects children's development as well.

Family provides the first insights on basic rules of behaviour, as well as the overall attitude to life. Following experience forms in educational institutions, where child develops commonly accepted behavioural norms and attitude towards peers and adults (Špona, 2006; Bula-Biteniece, Jansone, 2013). The child's thinking can be described as a straight, irreversible and self-centred. At this age child has not yet clear understanding of time, space and the continuance of the events. Child's life path largely depends on what are the family values, including social status, parents' education level and occupation, as well as wealth. Family provides motivation and supports initiative: "I can" - expressed by the child, and this cooperation moves learning process towards self-directed learning (Kons, 1985; Крайг, Бокум, 2005).

Readiness to self-directed learning process also includes the signs of acquiring self-directed behaviour. In cooperation with the family, it is possible to adjust the children's behaviour, but first it is necessary to define clearly, which children's behaviour considered as a problem, and what exactly should be changed. The first step to the self-directed behaviour is identification of potential problem and formulation of the desired behaviour to achieve (Watson, Tharp, 1972). Any individual's behaviour forms to be judged in the context of a particular environment. Self-assessment of a child's actions leads to persistent perceptions about what consequences follows and what reaction for each activity can be expected. Children remembers what behaviour is supported and what is being punished for according to particular environment, observes adult and peer response and assess the consequences of the action. Children use the internally established criteria of behaviour and consequences to adjust future activities and assess the effectiveness of behaviour change. Zimmerman included the model of self-assessment in overall socialization concept, where self-regulation gradually moves from effect of socialization to internally initiated process (Schunk, Zimmerman, 1997).

The process of self-regulation can be positively supported by receiving feedback from parents and educators. The next stage in the development of self-regulation, when children unintentionally knows how to apply the earlier acquired behaviour patterns, which can be called as self-control. Ability to apply self-control skills in previously unknown environment can be considered as certain level of self-regulation, which can be internally motivated activity itself (Bronson, 2000; Berhenke, 2013). The internal self-motivation is described as "a general desire to be a rewarded, and to develop a set of behavioural rules that helps to control own behaviour in the context of the current environment."

(Bronson 2000). Feeling that the chosen behavioural model has provided the desired outcome, serves as an amplifier of emotion and motivation for future action.

The transition from childhood to maturity slightly depends on how big is the difference between the requirements raised by the adults and self-requirements accepted by children themselves. As a result of accepting responsibility, young people separates from family to start independent life, but the person's age before making such decision tends to increase (Kons, 1985).

Secondary school graduates face the difficulty to make choice of professional identity. Secondary school graduates of the difficulty choice of professional identity, as young people are still feel dependent on family (Svence, 1999). The inclusion of the individual in the environment is often mistakenly considered as the absolute adaptation, avoiding possible conflicts. Diversity of opinion and views needed for individuals and society to continue evolving. Self-directed learning supports diversity of opinions, and each individual can reach learning goals according to own values and vision. Teacher observes the learning process and checks specific factors contributing to undesirable behaviours, analysing them and considering, what could be possible solutions, which, in cooperation with the parents could be possible to implement and support the child to become self-directed. Successful teacher's cooperation with the children based on knowledge of the child's world vision, confidence and self-esteem.

Happy and creative youth primarily determined by the atmosphere, which prevails in school and the students' relationships with teachers. In this age, children are eager to find in teacher an older friend and mentor, rather than a peer, and this equality should be mutually accepted. It is about voluntary creative cooperation between students and educators. "There is no personality without freedom and creativity" (Kons, 1985). Freedom is possible when there is a choice and the choice is the basis of motivation. Teacher should help as much as needed, to let students learn to learn independently (Žogla, 2001).

Rubinstein holds the idea that any teacher's goal to bring the child's knowledge and consciousness of ethical standards, bypassing the child's own vision and values, destroys the child's mind and moral development, and his personal upbringing healthy basics (Рубинштейн, 2002). Learning is active and consciously organised process that can be formed by learner, based on his previous experience and knowledge (Keefe, Jenkins, 2000). The teacher's goal is to share responsibility for learning with each student individually. Fischer and Frey describes teacher sharing responsibilities with pupil as: "I do it", "we do it", "you're doing it together", "you do it alone", gradually handing over responsibility to the learner (Fisher, Frey, 2008).As students become more independently in their own learning process, the teaching process becomes more personalised. According to the constructivism learning theory, learning process should create an environment that empowers students to take responsibility for their own construction of knowledge, as well as to take the initiative in learning process by choosing individual abilities and skills according to the task, rather than just learning facts and doing mechanical exercises on the performance of standard tasks.

When constructing new knowledge, students will acquire meta-cognitive knowledge, also knowledge of thinking strategies and knowledge about individual learning process (Jonassen, 2011). J. Piaget believed that goal of teaching is to create the conditions that enable the learner to create or discover knowledge. When teachers are too detailed, they do not allow students to discover and understand topic by themselves (Piaget, 2001). Therefore, teaching is not a transfer of knowledge to future generations, but creating the conditions for the students to open or create new knowledge by themselves. Furthermore, using meta-cognitive skills and understanding of cognitive processes, students create their own learning environment (Reigeluth, 1999)

The criteria of senior class students' personal self-determination is life's basic values (Čehlovs, 2011). Youth puts more requirements than other age of man's ability to survive the changes and related conflicts, tension and pressure. A young person lives in the change process, where they must deal with uncertainty and anxiety, because not yet known what exactly youngsters are going to be in the future, and what career they will build. Youngsters emotionally separates not only from parents, but also from his "internal parents". Temporary attenuation of their internal ego also caused by lack of daily parental support (Brummers, Enckells, 2011). Respectful treatment and parenting support for young people is an important value in the development of their further life.

Based on the study of theoretical literature, the game "New friend" was created for the 6-7 year old pre-school age children, the purpose of which was to promote cooperation in the communication model child – parent – pre-school teacher. Parents proposed to children different types of activities, and recorded the reactions of children in specially prepared parental observation diary. The first important task was to make a toy jointly with the child, whose future role would be the role of negotiator in communication. Parents recorded their observations on the child activity in free form, and according to the following statements:

- I had to encourage my child at start-up;
- child enthusiastically engaged in process;
- child involved in the process other persons;
- my child found this exercise interesting;
- for me this exercise was interesting.

By participating in the game, child with the parents jointly did the exercises developed and offered by the teacher. Filled parental diaries pointed to non-standard situations, and with every next exercise made children become confident about their actions, expressing the wish to receive the welcoming words and ratings. The children began to analyse the different ratings that are good and bad, as well as if the assessment was fair or unfair. At the beginning doing exercises was a challenge, needed encouragement, however, with each subsequent exercise parental involvement was required less, and children started to work independently. The total period of mentioned activity was six months.

Individual readiness to self-directed learning process can be checked in a specific test, by answering a number of self-assessing questions that describes the readiness to learn independently and overall consciousness to learning process. In Pre-school context most of the questions are not straightforward understandable for 6-7 year olds, but the questions can be adjusted according to Dembo-Rubinstein self-assessment test, maintaining the substance of the matter, and levels of gradation, thus determining the readiness of children to self-directed learning process. Not only individual's self-esteem level, but also the basic needs satisfaction level according to A.H. Maslow's (1955) hierarchy of needs can determine readiness to self-directed to learning process (Saeednia, Md Nor, 2012). Basic needs satisfaction level is possible to determine by the interviewing children and their parents in accordance with the following criteria:

- microclimate in the family; the extent to which parents support their child's activities;
- family support for the child's autonomy;
- the child's wishes and interests;
- leisure activities in the family.

Study on the basic level of satisfaction (Saeednia, Md Nor, 2012) point to a correlation between overall life satisfaction and willingness to self-directed learning process, as well as a confirmed family support and children's recognition of the importance of the autonomy of the self-directed learning process run smoothly. The higher the level of satisfaction of basic needs, the better you can use self-directed as an alternative to learning model. Behaviour can be considered as self-directed only if it is internally motivated. Otherwise, the child has controlled through awards or penalties, or his behaviour focused on recognition from the public. From an empirical point of view, the internal motivation is essential for self-directed learning process. Those children who experimentally kept attention on the inner conscious goal, achieved better results and showed more interest in the learning process, as those children whose attention focused on the external projections, to achieve goals while not understanding them well (Deci, Ryan, 1985).

To understand the succession of self-directed learning development in preschool and secondary school, the questionnaire, based on the objectives set out in the parent diaries described earlier, offered to fill out by students. The questionnaire designed with open questions and closed questions with a structured evaluation interval scale and bipolar questions with an interval scale. The data displayed in a stacked bars and statistical significance was determined with the Pearson coefficient for 97 and 14 pairs (Geske, Grīnfelds, 2006). 97 respondents participated in the survey from the mainstream secondary school 10th to 12th grades.

Results and Discussions

Survey analysis of the stacked bar visually shows the breakdown of responses. Stacked bar diagrams shows how students perceive parental assessment of their actions when they are in preschool years 6 to 7, planning of their actions in near and distant future and how assessment in general encourages them to undertake initiative, independence, and responsibility and self- direction.

Parental assessment (for 6-7 years old) understood as:

	No	Little	Average	More than average	A lot of
Criticism	14%	26%	24%	23%	13%
Inducement	3%	10%	15%	36%	35%
Encouragement	1%	10%	20%	32%	37%
Support	4%	13%	32%	51%	
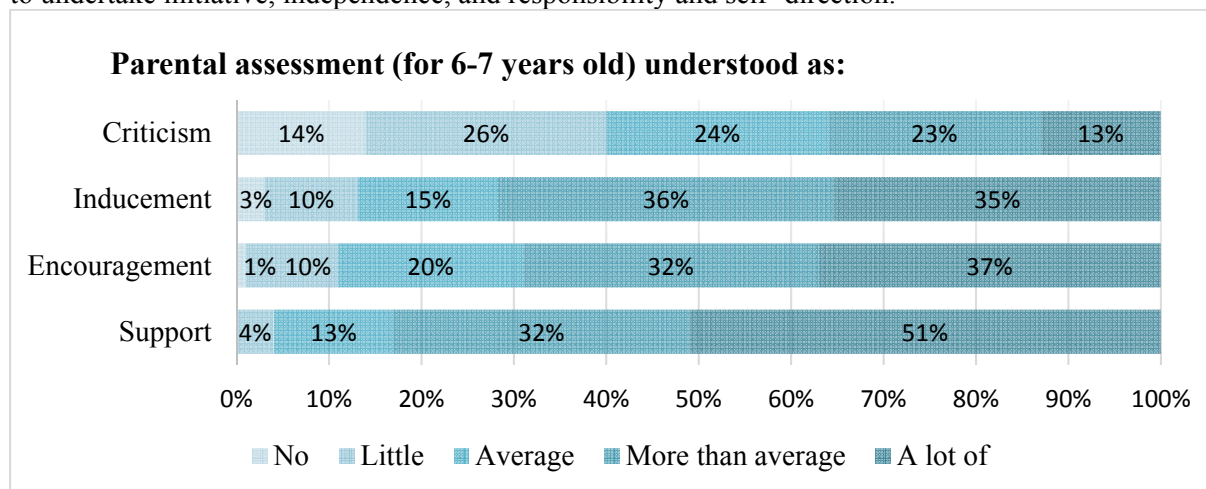
Figure 1. Parental assessment for 6-7 years old children.

In figure 1. are answers by secondary school students about how they felt about the assessment made when they were 6-7 year olds kids. 51 % of secondary school students felt support, 36 % felt little inducement, a little encouragement for 37 %, slight criticism of 26 %, and 13 % of respondents felt a lot of criticism. Young people mentioned that parents tried to explain them how they should act with suggestions how to improve the work done (11 %), expressed pride in their children (20 %), supported them (15 %).

I like to plan my own time

	Do not plan	Planned by others	Asking parents advice	Planning by myself
For longer time	40%	1%	39%	20%
For a month/year	29%	2%	22%	47%
For a week	9% 2% 1%			88%
For one day	11% 2%			87%
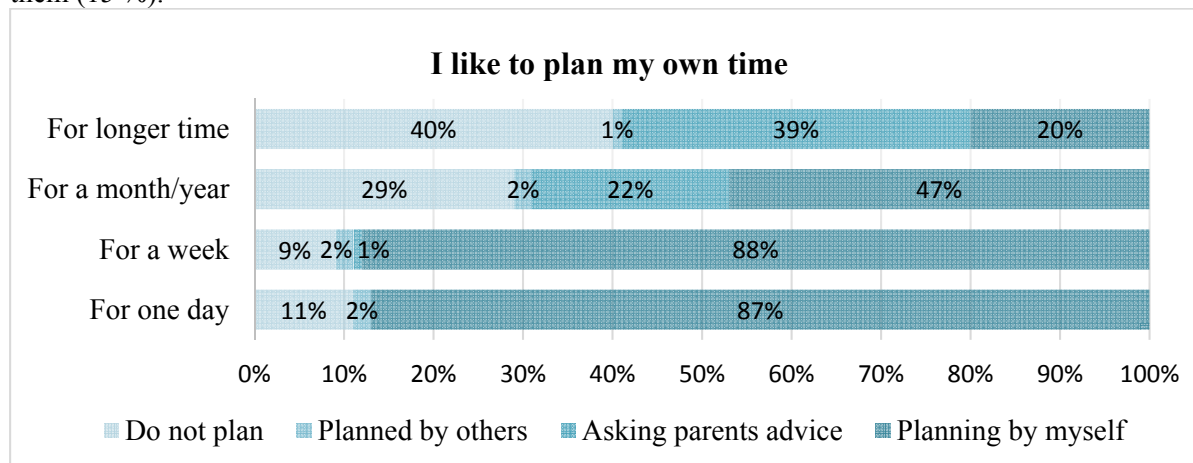
Figure 2. Time planning by secondary school students.

Figure 2 shows a students' ability to plan time, which shows that 87 % of secondary school students are making plans for one day and 88 % are making plan for the week by themselves, but 40 % of the respondents did not plan for a long term, and 39 % are requesting parent's assistance. Separating the respondent answers indicates that 6-7 year olds have received much criticism. It is possible to find a statistically significant relationship (0.53) between receiving support and planning for a longer period - for several years. Relationships of statistical significance expressed in the Pearson product moment correlation coefficient, which defined in the measurement interval scale for 14 pairs (Geske, Grīnfelds, 2006).

Figure 3 depicts the assessment, which encouraged taking the initiative "a lot" – 19 % of respondents, independence 31 % of the respondents, 36 %, responsibility and 37 % of self-direction. Setting the Pearson correlation coefficient of 97 pairs, it was found that there is a statistically significant relationship

between taking initiatives in secondary school and receiving encouragement from parents for 6-7 year olds (0.25), between independence and support (0.25) and inducement (0.24) from parents at 6-7 years of age. There is a statistically significant relationship between self-direction and support (0.26) from parents at 6-7 years of age. There is also a statistically significant relationship between the beliefs about ourselves and the encouragement (0.24) and inducement (0.25) from parents at 6-7 years of age.

Assessment encourages to commit:
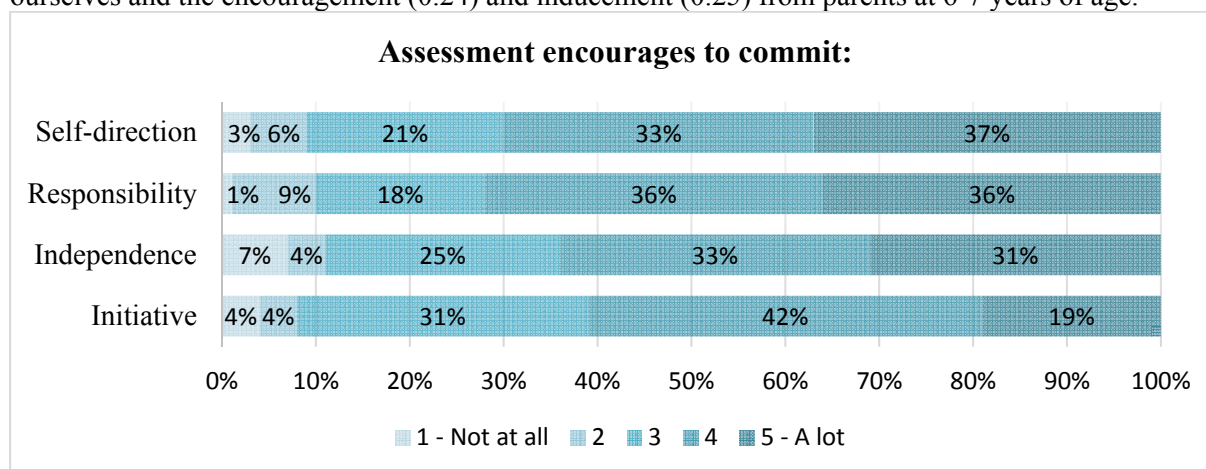
Figure 3. How assessment encourages committing initiative, independence, responsibility and self-direction.

To describe young people attitude towards parents and adults around them, results of earlier made questionnaires has been analysed. The survey was carried out in mainstream secondary school different 10th grades, every three years - 2008, 2011 and 2014. Student's survey indicates that the vast majority of young people do not go for advice from adults. To find out what secondary school students want to achieve within three years learning in secondary school, they were asked to specify goals, the achievement of which will depend on the personal activities, as well as specify who would be asked for help, if any, would be required. The answers were different, but pointed out to a lack of confidence in adults. Survey showed that 43 % of students would ask support and advice from their parents, but 64 % from teachers (2008), parents – 38 %, but from teachers 72 % (2011) and parents – 53 %, but teachers -44 % (2014). In the latter survey of secondary school students by asking the direct question, "when you ask parents for advice on matters related to important decision making" - only 17 % answered that never asked for advice from parents, but the decisions made by themselves. They asked for advice in cases related to the continuation of education (31 %) and career choices or future (16 %) or in case of questions related to financial matters (6 %). Young people are asking for advice from parents when expecting that parents have more experience (13 %). On the issue of learning young people indicate that asked parents' advice learning Russian language (16 %), learning other subjects - history, mathematics, chemistry, German, literature (17 %). Young people values parental views on matters relating to the experience, as well as about the ideas for projects or alternative opinions on various issues (17 %).

There are limitations to this research. The study conducted in three comprehensive secondary schools. Young people have chosen learning in secondary school by themselves or with parental advice. In the survey there was no young people from other educational institutions whose background might be different. It did not take into account what is the parents' education, whatever their social status and their willingness to cooperate with the school. There are many active parents they are worried that there is no constructive cooperation with the school, because they are ready to assist with their experience and knowledge. Latvian parents' forum brings together nine organizations of parents, including the most active "Parents for education, cooperation, and development"," Latvian parents' movement" and "Parents for Education" (Kempele, 2015). Organization "Latvian parent movement" founded in 2011 in April 2014 conducted a survey on the desired quality of education in their city or region. For parents and school cooperation in the development of children's talent 99 % of the respondents recognized as necessary and an early talent developing for successful future career choice 97 % of the respondents recognized as necessary for collaboration. Parental proposals are to organize the school and family

unifying events, support parent's initiative and begin the work towards the children future career choices are already in pre-school (Aptauja vecākiem…, 2014).

There is methodical aid co-written by State Youth Initiative Centre and organization "Parents for education, cooperation, and development", founded in 2004. From methodical aid, some of the considerations defined for school and family cooperation are coordinated educational requirements for children, parents' pedagogical education, updating the latest researches and approaches in pedagogy and psychology and the benefits for the child as a person. Parents organization ordered study on "Parental participation in decision-making in education issues". The study found that 47 % of parents believe that there is no need to cooperate with the school, while 32 % of parents do not believe that cooperation with the school something will change, and a parents' perspective will be heard. According to the survey results 19.7 % are active parents, busy and distanced form 35.1 %, which are willing to cooperate with school and 45.2 % form the disinterested about cooperation with the school. Parents as effective offers individual forms of cooperation with the school (Klauža, Kozaka…, 2009).

A. Šteinberga from Riga Technical University, Institute of Humanities, argues that in schools are still very common "Pedagogy of events" in cooperation with the parents, but the events are not co-operation. She explains that the school is too bureaucratic and teachers do not have time for meaningful human interaction with colleagues, students and their parents. Her recommendation is that the school should provide an opportunity for parents to learn to be "a good" parents (Kronberga, 2012).

Student answers to the survey shows that students value parents' experience and could work together with them. These activities could be projects; student parents nights, sport events. Starting from preschool parents have to be present in their children lives in and out of school to share experience, knowledge and values.

Conclusions

Discussing the progress of the method „New friend" with the parents at the end of the first week, the parents found that children played with self-made toys much more than the shop purchased toys. Projective method "New friend" generated many positive emotions in the group and stimulated new ideas for children games both at home and in pre-school. Overall interest expressed by the children of the common interest of the child is grown up, revealing kids successful storyteller, circus artists, as well as children better see his good side and probably able to recognise their failures as well as the fact that "I'm a little lazy, because I sometimes like to do nothing".

Young people acquire life skills, learn to make decisions, create their own value system. Value system determines the quality of the decisions, so the school creates a model of cooperation between teachers and parents that provide students a unified information space of knowledge. The school is responsible for the productive cooperation and partnership between the school and the family. Cooperation based on mutual respect and the wishes of the student in learning process. Communication with parents, coordination of activities and setting a common target is important to ensure continuity of self-directed learning and learning skills. The student survey indicates a positive correlation between parental involvement, and future learning achievements of results, time management, and ensuring mutual trust.

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ICT Competences as a Necessary Part of Professional Qualities at the Latvia University of Agriculture

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Abstract: The submitted contribution focuses on the question of information and communication technology (ICT) competences as a necessary part in education and professional qualities of both a teacher and a student. It is known that nowadays ICT plays an increasingly important role in people's lives, as appropriate technological literacy will soon become a functional requirement for people's work. Students will need computer and communication technology skills if they wantto live successfully in a knowledge-based society. The efficient use of various information communication technologies in the learning process has become inevitable for students. It is obvious that by using modern information communication technologies students can retrieve required information within a short period of time. They can access and disseminate electronic information such as e-books and e-journals. Moreover, they can improve their learning by using different modern ICTs in the form of wireless networks, the Internet, search engines, databases, websites, and web 2.0 technologies. UNESCO has presented the ICT competence standards for teachers combining the requirements for teachers and students in today's world and emphasising the current importance of ICTs. The aim of the article is to describe a range of ICT competences and their important role in the teaching profession as well as for a student in the so-called information society. The SPSS computer program has been used for mathematical processing and data analysis. The main use is given to ICT tools is as a means of obtaining information, and according to students, they make a legal and responsible use of the ICT tools. These results suggest developing strategies promoting the effective use of technology resources for both students and teachers.

Keywords: ICT competence, higher education, professional qualities, teachers, students.

Introduction

The rapid changing of life requires a support for continuous learning and creation of new skills and ideas. The lifelong education is becoming a necessity in tomorrow's world. The Internet has changed the education process significantly in the last two decades. We are now entering a world in which we all will have to acquire new knowledge and skills on an almost continuous basis. The Internet and ICTs have greatly expanded into the field of education recently. The global adoption of new technologies into education provides an opportunity for its modernisation (Virtič, 2012).

Teachers are a vital link in the education line, and to truly respond to the needs of the twenty-first century, teachers must play a central role in linking technology, and in particular, using old and new Information and Communication Technology (ICT) devices in both teaching and learning processes (Danner, Pessu, 2013).

One question of the survey "Internet Habits" was: *How often do you use the e-mail, online chat, Skype, Twitter and Facebook?* The answers frequency from respondents about mutual communication (e-mail, online chat, Skype, Twitter, Facebook) via the Internet (regularly every day, once a week, several times a week, once a month, several times a month, rarely) can be seen in Figure 1.

UNESCO has presented the ICT competence standards for teachers' professional qualities combining the requirements for teachers and students in today's world and emphasising the current importance of ICTs (ICT competency..., 2008).

R.M. Gras reports the results of the research that was conducted in Spain among 5169 students. It was concluded that ICT changed all aspects of social life but University students and digital illiteracy was almost non-existent (Gras, 2009).
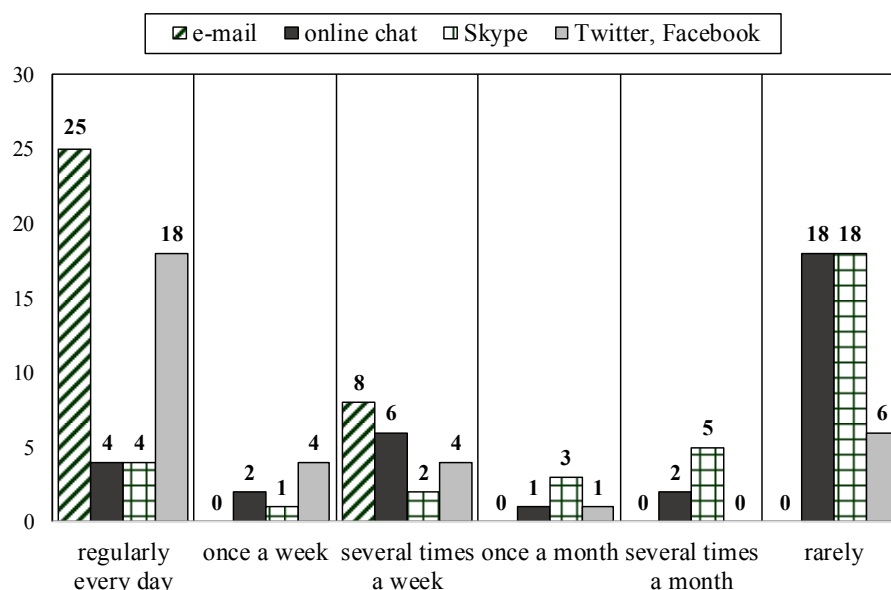
Figure 1. Mutual communication via the internet.

ICT integration into education depends on complex teachers' readiness. As to this, there arise many questions, e.g. how will teachers use ICT, how will they be able to make the best of them, how will they implement them into education process, which ways of teaching will they use to stimulate their students, how will they develop the components of a student's personality (Kubrický, Částková, 2015).

The use of ICT, especially its positive influence on teachers' education has been widely studied and documented (Kay, 2006; Murray, Nuttall, Mitchell, 2008; Vronska, 2012).

The document Action Plan for the implementation of the "Strategy of Information and Communication Technology in Education for the period 2009 - 2013" sets two essential conditions for reaching the aims of innovation process in education. Particularly, it talks about reaching the aims by means of the modification of teaching practices and a teacher's role. The teacher has to go through certain phases, from which teacher's professional qualities and competences with direct link to the use of ICT have to develop and become more precise. The phases of this process can be summarised in the following way:

- necessity – this is mainly accepting the necessity to know ICT, which are generally possible to be used in education and teacher's profession;
- mastery – the choice of more effective strategies, better teaching models and freedom from ICT specialists enabled by increasing technical knowledge;
- empathy – technology is not the aim but the means; the range of usable technologies is broadening;
- innovation – the achievement of functional creativity, own adjustment of education aims, plans and practices (Akční plán…, 2009).

Competences in ICTs can be classified as:

- the core competences of digital literacy, which are related to the use of ICTs in the classroom presentations and activities, and involve the use of digital tools to obtain information, and the use and development of materials obtained from various online sources;
- the implementation competences, which are related to the use of skills and knowledge to create and manage complex projects, solve problems in real-world situations, collaborate with others, and make use of information and experts networks;
- the ethical competences, which are related to the ethical, legal and responsible use of ICTs (ICT competency..., 2008).

The aim of the article is to describe the ICT competences and their importance for the work of a teacher or student in the information society.

Methodology

The purpose of this survey was to identify the level of ICT competences of Latvia University of Agriculture students and compare the results with the level of ICT competences of students from Mexico and Hungary. The instrument for data collection was a survey adapted from C.A.T.Gastelú, G.Kiss, A.L. Domínguez (2015). The target population was Latvia University of Agriculture master students (30) of the Institute of Education and Home Economics of Faculty of Engineering of Latvia University of Agriculture. The research type is quantitative.

The instrument of ICT competences levels of students is composed by twelve items. The design of the instrument included Likert scale with four categories: "None, Few, Quite and A lot". For purposes of this study it has been assumed that students have a certain level of competence and levels has been shaped by the categories "Quite" and "A lot". Meanwhile, the absence or deficiency in competence categories has been represented by "None" and "Few". To analyse the data obtained the Statistical Package for Social Sciences (SPSS) version 21 has been used.

Results and discussion

In the Table 1, χ^2 test results show the level of ICT competences of Latvia University of Agriculture students. It also shows the level of ICT competences of students from Mexico and Hungary.

Table 1

χ^2 **test result of the levels of competences**

Item	Students from Latvia	Students from Mexico and Hungary
You use the main informatics and network resources	0.000	0.000
You use the applications in a productive way	0.178	0.798
You apply the digital tools to obtain information from varied sources	0.020	0.006
You select, analyze, and makes an ethic use of the obtained information	0.078	0.001
You communicate in an effective way the information and ideas, using a variety of media and formats	0.002	0.088
You make use of models and simulations to explore complex topics	0.020	0.015
You interact and collaborate with your partners, using a variety of digital resources	0.103	0.001
You solve problems, and make decisions using the appropriate tools and digital resources	0.020	0.000
You plan and organize the required activities to solve a problem or make a project	0.001	0.742
You make a rational and responsible use of the information through ICT	0.178	0.398
You value ICT as an instrument of permanent learning	0.000	0.389
You value ICT as a medium of collaboration and social communication	0.009	0.385

The similar differences found in the test include items: *You use the main informatics and network resources*, *You apply the digital tools to obtain information from varied sources*, *You make use of models and simulations to explore complex topics* and *You solve problems, and make decisions using the appropriate tools and digital resources*.

In relation to the items of general results *You communicate in an effective way the information and ideas, using a variety of media and formats (*68.2%*)*, *You plan and organize the required activities to solve a problem or make a project* (63.6%), *You value ICT as an instrument of permanent learning* (86.4%)

and *You value ICT as a medium of collaboration and social communication* (81.8%) it can be seen that the students of Latvia University of Agriculture are competent with ICT.

ICT skills are purposeful, qualitative and wilful application of ICT searching and evaluating information according to the set objectives, aims and demands as well as purposeful, qualitative and wilful usage of ICT basic skills and extended skills (Vronska, 2012).

At the global level UNESCO designed a competence framework for teachers (ICT-CFT), which was launched in 2008 to help educational policy-makers and curriculum developers identify the skills teachers need to harness technology in education (ICT competency..., 2008).

The Competence Standards were developed in cooperation with Cisco, Intel, and Microsoft, as well as with the International Society for Technology in Education (ISTE). The framework was created by crossing three approaches to ICT integration in education (Technology Literacy, Knowledge Deepening, and Knowledge Creation) with the six components of the educational system (Policy & Vision, Curriculum & Assessment, Pedagogy, ICT, Organization & Administration, and Teacher Professional Development). This is shown in Figure 2.
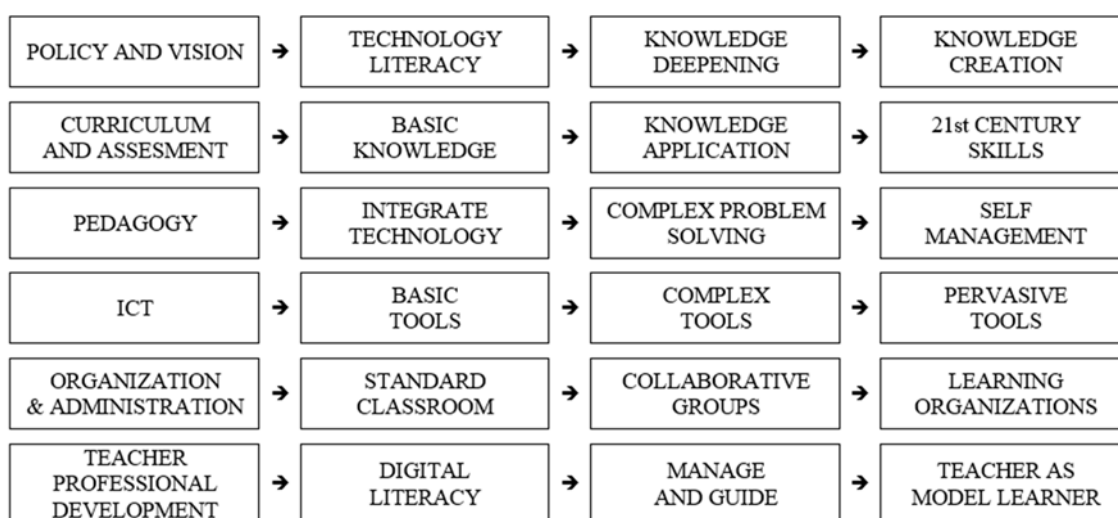
Figure 2. UNESCO ICT Competency Framework for Teachers (ICT competency..., 2008, 7).

The competences focused on the use of web pages for the development of students' independence and creativity proves the flexibility and variability of the web as an environment, which, if used efficiently, facilitates students' 'personality development and contribution to the quality and innovation of education' (Kubrický, Částková, 2015).

P. Kirschner and I.G. Woperies highlighted some major ICT competences that teachers might require. These competences are:
- making personal use of ICT;
- mastering a range of educational paradigms that make use of ICT;
- making use of ICT as minds tools;
- using ICT as a teaching tool;
- mastering a range of assessment paradigms which involves the use of ICT;
- understanding the policy dimensions of the use of ICT for teaching and learning (Kirschner, Woperies, 2003).

I. Jung considers that ICT teacher training can take many forms – teachers can be trained to learn how to use ICT or teachers can be trained VIA ICT. ICT can be used as a core or a complementary means to the teacher training process (Jung, 2005). Development of ICT skills for teachers is represented in Figure 3.

Core Technology

bacis ICT skills	basic ICT skills development

Learning How to Use ICT ———— 1 | 3 ———— **Learning VIA ICT**
2 | 4

ICT as part of study content	professional ICT skills development

Complementary Technology
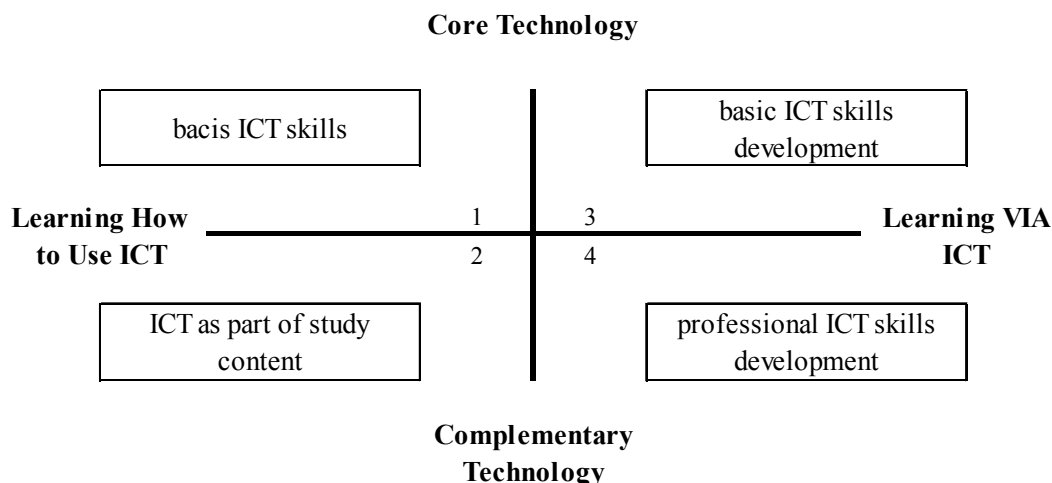
Figure 3. Categories for ICT in teacher training (Jung, 2005).

ICT competences are included in the educational standards that various countries have developed in the form of profiles in the United States, France, England, and in Belgium. It is important to note that all the previous standards describe a key point of the educational development of ICT-literate students. NETS includes: the ability to make Web designs, presentations, databases, and the ability to use graphics software, spreadsheets, online applications, e-mail, chat applications, and word processors (ISTE Standards…, 2015).

Conclusions

The results referring to the Latvian students' perceptions about their competences in ICT show that they express a high level of competences in the use of ICT. The students got a high level of competence when using ICT as a permanent means of learning, as well as a means of social communication. The students indicated that they make a productive use of the various applications that are offered. These results suggest the need for developing strategies promoting the effective use of technology resources for both students and teachers.

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Competence Approach in Vocational Education of Kazakhstan in Conditions of Innovational and Industrial Development of the Society

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Abstract: The system of education at the present stage of social development is undergoing significant changes, which are characterized by strong innovative processes demanded by the mass participation of teachers in these processes. The Medium-Term Strategy as a basis for further development of the education system is determined by the needs in teacher training, ready to work in a high-tech learning environment. As a result of innovative processes taking place in modern society is developing a new system of educational values. In twenty first century, fully manifested the deep dependence of modern civilization on the skills and personality traits which are in the formation of the education. New paradigms resulted in a review of approaches to the development of education strategy; it demanded a clear focus on the needs of individuals and society. This article reveals the essence of modern paradigms of education focused on personal approach to teaching and education of the younger generation. Justified by the need to change the goals of the education system, its contents and organization. The authors have disclosed the main directions of the state educational policy in the Republic of Kazakhstan to reform the education system to meet new requirements of modern educational paradigms and entry into a single global educational and information space.

Key words: competence model of education, paradigm, modernization, approaches in vocational education.

Introduction

By the beginning of the new millennium fully manifested a deep relationship UNESCO has been defined a new approach to understanding the formation of the modern civilization of those abilities and personality traits, which are laid in education. At the twentieth session of the General Conference as a result of the process and improve the capabilities and behavior of the person, which reaches social maturity and personal growth (The XX session..., 1997). In this context, the need to study the features of the educational process becomes more topical.

Relevance of research is also supported by the fact that the modern educational paradigm significantly changes the perception of the purpose of education. Higher humanistic sense of social development in the modern educational paradigm becomes a statement related to the person as the supreme value of life, creating conditions for the free development of each person. In the "UNESCO World Report on Education. The right to education: towards education for all throughout life "was proclaimed:" Education has to be directed to the full development of the human personality, the most valuable of his qualities, and a greater sense of respect for human rights and fundamental freedoms". (World Education..., 2000). Thus, we have identified new goals and objectives of education and the transition to a new educational paradigm.

Methodology

Changing the paradigm of education led to the need to review the nature and content of the basic categories of pedagogy: education, bringing up and study. *"Education - the process and the result of identity formation through the assimilation of human ways of life and systematic knowledge and skills, the development of the mind and senses, the formation of philosophy and cognitive processes* (Педагогика…, 2015). This approach to the disclosure of the meaning of education in modern conditions generally change the essence of the activities of the teacher, which should now be directed not only to transfer students a certain amount of knowledge and skills, and to create conditions for their personal growth and development.

Results and discussion

Let us start by considering the facts of the *humanistic paradigm* of education system which should take into account the interests, needs and abilities of students. Through research scientists such as E. V. Bondarevskaya, (Бондаревская, 2000); I. S. Yakimanskaya, (Якиманская, 1996); V.P. Serikov (Сериков, 1994), A.A. Pligin (Плигин, 2003) and others have been established the theoretical basis of *student-centered education* that ensures the development of the student's personality and self-development, taking into account the identification of its individual features as the subject of cognition and action. According to experts N.N. Nikitina, O.M. Zheleznyakova, M.A. Petukhov (Никитина, Железнякова, Петухов, 2002) in *student-centered education paradigm:*

- a person is regarded as a complex self-organizing system, recognizes the uniqueness and individuality of each person;
- target setting education shifted from the individual information to create conditions and assist in the development and self-development of the whole person;
- changing the position of the student in the learning process, which should be built in accordance with its needs, interests and capacities (Никитина, Железнякова, 2002)

One argument in support of pedagogical science and practice that proved the success of the work of the teacher depends on the implementation of *student-active approach*, where the individual was seen as a stakeholder, which itself, forming in the work and in communion with others, determines the nature of the activity and communication.

Today, a number of scientists V.V. (Сериков, 1994), V.V. Selevko (Селевко, 2004), S.B. Seryakov (Серякова, 2004), O.E. Lebedev (Лебедев, 2004), A.V. Hutorskoy (Хуторской, 2001) and others stand upon the *competence model of education*, according to which, the level of development of the person is not determined by the amount of their encyclopedic knowledge, and the ability of students to solve problems of varying complexity on the basis of existing knowledge as it suggested by I. Briška, J. Klišāne, I. Brante, I. Helmane, L.Turuševa, Z. Rubene, I. Tiļļa, R. Hahele, I. Maslo (Briška, Klišāne, 2006).

Perhaps we should also point out the fact that G.K. Selevko's the concept of "competence" is considered as the result of the educational process, manifested in the "trained graduates in the real knowledge of methods, means activity, the ability to cope with the tasks; such forms of combination of knowledge, skills and abilities, which allows to set and achieve goals to transform the environment" (Селевко, 2004). Implementation of *competence-based approach* contributes to the formation of high school graduates in key competencies in the intellectual, social, political, communication, information, and other spheres.

Nevertheless, today, the school puts a sophisticated task - to prepare students to play a constructive role in a rapidly changing world, and this in turn requires a focus on the concept of learning in twenty first century of global education, including knowledge, skills, attitudes and values necessary to empower the individual in a complex and rapidly changing world.

One must admit that problems of activity of the teacher in the *context of globalization of education* found wide coverage in the works of foreign scientists H. Michael, K. Lythoe, C. Meyers (Michael, Lythoe, 1999), R. Enstace (Enstace, 1989) and others. Global education, by definition of a professor of the International Institute for Global Education (USA), D. Selby – it is a *holistic paradigm of education* with the *central to the concept of global education* is the idea of ensuring the independence and empowerment of each individual student in a positive, democratic and unified environment that promotes active participation by all (Selby, 1990). This concept suggesting that the activity of the teacher should be directed for the armament of the student's abilities and skills, which he'll need in the future life.

Besides, the well-known American educators J. Gudled and J. Goodlad speaks about the *role of schools in the modern post-industrial society*" (Гудлэд, 1984; Goodlad, 1984). Another scientist I. Goodson (1991) highlighted twelve priorities what show particular interest that meet *modern requirements for school*, among them: to give students basic skills and fundamental processes (reading, writing, speaking, mathematical concepts and actions); cognitive development (development of thinking, problem-solving

skills, capacity for independent judgment and decision-making); preparation for the profession and further education. Other objectives include: civic education; the formation of a positive self-concept and interpersonal skills; development of creative abilities; emotional and physical development; moral education.

In the framework of this theme we should also point out the fact that the education system of the Republic of Kazakhstan is also focused on the *basic ideas of student-centered education paradigm*. The arguments we have presented according to T.N. Saytimova conducted study led to the conclusion that: "Analysis originating in Kazakhstan's education changes over the past two decades has allowed to define them as a *transformation,* which includes the processes of reform and modernization policies; declared at the turn of the new century. Changing the ideological and social guidelines entailed search for a new paradigm of education, which is based on the principle of self-worth man capable of self-development; self-improvement and self-education throughout life" (Сайтимова, 2011).

Thus, *the modern paradigm* is focused on the fact that the educational system must be able not only to equip the student's knowledge, but also due to the constant and rapid updating of knowledge in the era of globalization and information, generate a needs for continual self - mastery of them, seizing the means of training activities and skills self - education.

The current stage of development of the system of secondary education in Kazakhstan is characterized by *large - scale reform* affecting its basic *framework, methodology*. In the first place in the republic made the transition to a new model of *general secondary education*, which oriented on result. Among the mechanism of modernization of the national education system extends the *principle of change in the organization of learning* and the role of the student in the form of passive "recipient" of knowledge and skills to active participant of the cognitive process.

One must admit that based on the competence paradigm of education, "Education Development Program of the Republic of Kazakhstan for 2011-2020" focuses on the formation of the education system the following basic competencies of students. School graduates should:
- to understand the scientific picture of the world, to have the skills to search and research and creative activity;
- to be able to match its capabilities with the real prospect of planning and management, responsible for their decisions, actions, and their lives;
- to be a patriot - The Republic of Kazakhstan, to show civic participation, to understand the political system, to be able to give a balanced assessment of the ongoing social events;
- to communicate in the Kazakh language, the language of international communication, foreign language; to be motivated to communicate in their native language;
- to be able to use new information and communication technologies, including for self-determination and professional growth;
- to be able to acquire the social skills to perform social roles in the family, community and collaboration with others;
- to use knowledge to maintain ecological balance, to care for the environment;
- to understand and appreciate the culture of the people and the cultural diversity of the world; to be committed to the ideas of spiritual harmony and tolerance (Программа развития…, 2010).

To achieve a high quality of education in this program documents is expected due to: elimination of congestion and reducing of content of school subjects, introduction of integrated courses; increasing the proportion of independent work of students, the use of design and research and information and communication technologies in education, the introduction of pre training in basic school; the choice of individual educational trajectory in high school, learning opportunities for international educational programs; gain a personal orientation of education - by 2020 every student of the republic will be registration number (portfolio), which allows to monitor progress throughout the training period.

Perhaps we should also point out the fact that, the educational system of Kazakhstan within the globalization is focused on integration into a single global information and educational space. Today, much is being done to ensure that the education system functioned in the legal field of education informatization defines all regulations and standards and computerization access; organization of open

and distance learning; development, testing and replication of digital educational resources and the creation of the Kazakh part of the Internet environment; technical and pedagogical support infrastructure and software of the educational process.

It is expected that in the coming years, organizations of all levels of education will be provided with a new generation of computers. If in 2008 was characterized by equipping schools with computers at a ratio of 1:21, vocational schools and high schools - 23 colleges - 19 schools - 10, the expected that in 2020 this ratio will reach 1: 1, which corresponds to world standards of security organizations educational computer equipment. Currently, the Russian indicator of students per 1 computer is 50, in the countries of the Organization for Economic Cooperation and Development (Latvia, Hungary, Czech Republic) - 13 in Austria - 7, in Canada and Norway - 6 in the UK - 5 in Australia - 5, in the United States - 4, Singapore - 2 students (Программа развития…, 2010).

Much attention is paid to the state educational policy of informatization of education, the development of which is expected in the following areas:
- software, which is based on ideologies, principles, tools open systems world community Open Source Community, and the system of world leader's brands;
- the introduction of network technologies: the control system class or group (CRMS); Learning Management System (LMS); content management system (CMS), system design interactive learning environment (LENS); System Design Resources (ERP), interaction management (CRM), system management planning (PMS), testing system (TMS), and others;
- subjects of all levels of education will be digitized in the form of interactive multimedia electronic textbooks in 3 languages in accordance with state educational standards;
- development and implementation of information and communication technologies that encourage the development of skills required students to succeed.

Perhaps we should also point out the fact that a key reference point for improving the quality of education in the country was the "National Action Plan for the development of functional literacy of students in 2012-2016", one of whose goals is to form in secondary schools intellectual, physical and spiritual development of a citizen of the Republic of Kazakhstan, the satisfaction of his needs in education, ensuring success and social adaptation in a rapidly changing world. "The main functional qualities of the person should be initiative, ability to think creatively and to find creative solutions, the ability to choose a professional way, the willingness to learn throughout life" (Национальный план…, 2012).

Conclusions

- Thus, the analysis of the state and the dynamic development of the national education system of the Republic of Kazakhstan indicate that currently before the Kazakh society faces the task of building a competitive education system that meets the needs of today's student-centered education paradigm.

- Education reform in Kazakhstan is aimed at fundamental changes in the objectives, content, form and timing of training in order to develop innovative global experience and gradual entry into a single global educational environment.

- The country developed the necessary legal framework in the field of education, which is fundamental to ensure the right of all citizens to education, helps create conditions that guarantee equal opportunity in matters of training, civic education, versatile spiritual and physical development of personality, meet its interests and needs.

- National and regional programs and concepts of Education of Kazakhstan aimed at solving the problem of education quality, requires a change in its content, form and implementation of innovative student-centered learning technologies.

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Peculiarities of Social Competence Development in Students of Grades 5-6 during Technology Lessons

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Abstract: Social competences acquired during successful socialization process provide conditions for the individual to function efficiently in the social environment. The problems of personality development and its expression in the history of technology education reveal the context of personality inter-culturalization and socialization: conditions of the person's presence in the environment and possibilities of the environment change are described taking into account the community values and the takeover process of customs in consequential change of science and technology. The goal of the research is to reveal peculiarities of social competences development in students of grades 5-6 during technology lessons. Research methods: analysis of scientific literature and documents, empirical research, statistical analysis of the research data. The research was carried out in 2013, 325 students of Vilnius general education schools and 14 technology teachers were surveyed. The teachers who participated in the survey were convinced that technology lessons are perfect for social competences development in students. Social competences of most students of 5-6 grades are of a sufficiently high level. The analysis of the research data demonstrated that technology lessons mostly contribute to development of the students' self-confidence, communication skills and skills of participation in various activities. Methods of evaluation and self-assessment, projects, situational games and brainstorming develop basic social skills and social competences. These methods as well as learning in groups and discussion techniques develop skills of participation in group activities and activity organization skills.

Keywords: social skills, social competences, methods of education, school education.

Introduction

Topicality of the problem. Currently, socialization is becoming more and more complex as due to globalization and the use of various information technologies the child appears in the midst of events of the 21st century. The features of socialization processes in childhood, individual achievements of a child and a group of children in socialization are usually described by the term *social competence* (Juodaitytė, 2002). Some researchers recognize that children having acquired social competence achieve better academic results, adapt to school easier and are less likely to commit crimes (Meisels, Atkins-Burnett, 1996).

Social competence is one of key competences, and *General Programmes* (Pradinio ir pagrindinio …, 2008) provide for that their development should be included in the curricula of all subjects. Key competences is the connecting substance of a person's professional activities, social life and existence; thus, it merges separate knowledge, skills and attitudes and consciously diverts that towards the targeted direction. Social skills are defined as certain patterns of behavior that make an individual socially competent and capable of influencing other people. The majority of authors define social skills as an expression of social competence (Birgelytė, 2012, Durlak, Weissberg, 2011).

The problems of personality development and its self-expression in the history of *technological education* reveal the context of personality inculturation and its socialization. Conditions of a person's entrenchment in the environment as well as opportunities for the change of the environment are described, and processes of succession of community values and customs in consistent scientific and technical change are taken into account (Statauskienė, 2009). This briefly described context highlights the research *problem*, i.e. the lack of research dealing with peculiarities of students' social competence development during technology lessons.

The object of the research is social competence development in students of grades 5-6 during technology lessons.

The aim of the research is to reveal, both theoretically and empirically, peculiarities of social competences development in students of grades 5-6 during technology lessons.

The objectives of the research:
1. To assess the possibilities of the students' social competence development during technology lessons.
2. To discuss social competence of the students of grades 5-6 and influence of technology lessons on its development.
3. To identify the methods used most often in technology lessons and to examine what components of the students' social competence they help to develop.

Research methods: theoretical: the analysis of scientific literature; empirical: questionnaire, semi-structured interview and content analysis.

Organization and the course of the research. The research was carried out in 2014. The respondents were selected according to the data for 2013-2014 provided by Statistics Lithuania. Four general education schools took part in the research. During the research, 325 students of grades 5-6 were surveyed (49.23 percent of boys and 50.77 percent of girls). 52.31 percent of the surveyed respondents live in cities, 32 percent of them live in rural areas, and 15.69 percent of the respondents are residents of towns. Moreover, 14 technology teachers working in the same schools were surveyed (35.7 percent of men and 64.3 percent of women). Distribution of teachers according to the qualification degree is as follows: six senior teachers, four expert teachers, three teachers-methodologists and one teacher. Software package IBM SPSS for Windows, Version 17.0 was used for processing quantitative research data. The content analysis method was applied for processing qualitative research data. The data obtained during the qualitative research supplement the answers of the respondents of the quantitative research and create conditions for foreseeing the areas of the assessment system to be improved.

Analysis of the concepts of social competence

R. Lekavičienė (2000) notes that there is a prevailing approach that social competence is related to the efficiency of a person's behavior. Differences between definitions of social competence and social skills are more of the semantic nature. M. Argyle (1980) defines social skills as certain patterns of behavior that make an individual socially competent and capable of influencing other people; social skills serve as an intermediary between the results of social activities and motor skills. The majority of authors define social skills as an expression of social competence. L. Rose-Krasnor (1997) draws attention to the fact that social competence is most often defined as a set of certain skills.

In A. Juodaitytė's (2002) opinion, the child's social competence can be described according to the constructs of thinking and activities self-acquired in social reality, and the latter must be separated from the learnt actions performed following the examples and rules provided by the teacher. The essence of socialization is comprised of the person's becoming a personality and a social individual. According to R. Malinauskas (Šniras, Malinauskas, 2006), social competence is discernment and high-level communication culture. A socially competent person always follows generally accepted norms of behavior and requirements of the code of professional ethics, remains dignified even in those cases when his/her decisions are resisted. The educator will avoid mistakes in assessing social competence of the child if he/she focuses not only on the repertoire of the child's actions performed according to the rules indicated or created by the teacher but also considering the child's personal action plans and self-created rules. American scholar M. Lipmann (1998) notes that this is one of the most important child's achievements in his/her social competence.

E. Vaivadienė considers that development of social competence is based on the following moral values: self-confidence, openness and empathy, respect for other people's rights, constructiveness in solving conflicts, sociality and creative thinking (Vaivadienė, 2011).

E. J. King states that a new theory should be based on the concept of education as a social phenomenon. Its key mission is to ground conceptually the need for the child's active position in the teaching (learning) processes (King, 1996).

In the view of R. Lekavičienė, the concepts of social competence supplement each other. Moreover, the concept of social competence is broader than the concept of *competence* as it involves personality features as well. Social competence is necessary for every personality who wants to achieve his/her goals and adapt to the environment (Lekavičienė, 2000).

I. Leliūgienė (2003) states that personality development and socialization continue throughout all its life; therefore, it is necessary to create conditions for social creativity through various forms of activity that would allow the child to perceive himself/herself as a personality. J. Jakštys writes that a personality is too complex to be explained by a single theoretical model (Lekavičienė, Vasiliauskaitė, 2007).

Scholars describe the child's possibilities in the environment of self-organization and propose new criteria for social competence: interaction through cooperation, agreement on joint activities, etc. All that also reflects the child's expression of autonomy and the way he/she seeks to acquire partners while communicating and maintaining with them necessary social contacts, which are considered as "exchange of values, symbols, intentions" (McIntyre, 1984, 71).

Š. Šniras and R. Malinauskas define the concept of social skills as an automated method to behave adaptively and adequately when not only he/she himself/herself but other individuals as well recognize efficiency of behaviour (Šniras, Malinauskas, 2006, 8). A student must be considered as a curious individual, seeking knowledge and goals, and learning is based on the concept of a person as a social and humane individual (Teresevičienė, Gedvilienė, 2003).

Results and discussion

Having researched the opinion of technology teachers on development of the students' social competences, it was established that they positively evaluate possibilities to develop social competences in students of grades 5-6 during technology lessons (Figure 1).
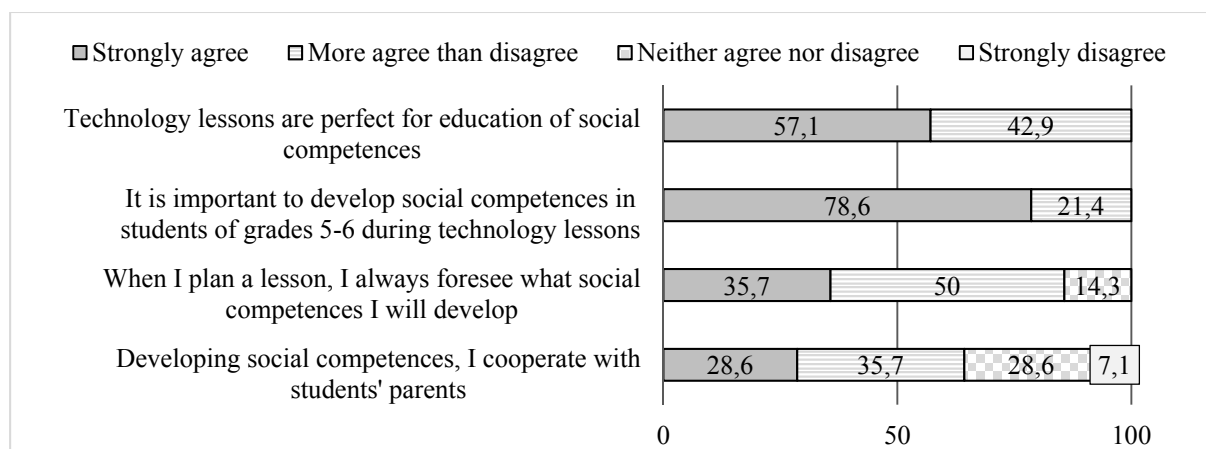
Figure 1. Teachers' opinion on education of the students' social competence.

M. Argyle (1980) and L. Rose-Krasnor (1997) state that social competences and social skills can be equated. R. Lekavičienė (2000) notes that social skills possessed by an individual may be considered as a key indicator of social competence. According to R. Lekavičienė (2000), D. Gailienė, L. Bulotaitė, N. Strulienė (1996), J. Buzaitytė – Kašalynienė (2007) the following social skills were distinguished: stressful situations, expression of feelings, organizing activities, participation in group activities and basic social skills (Figure 2).
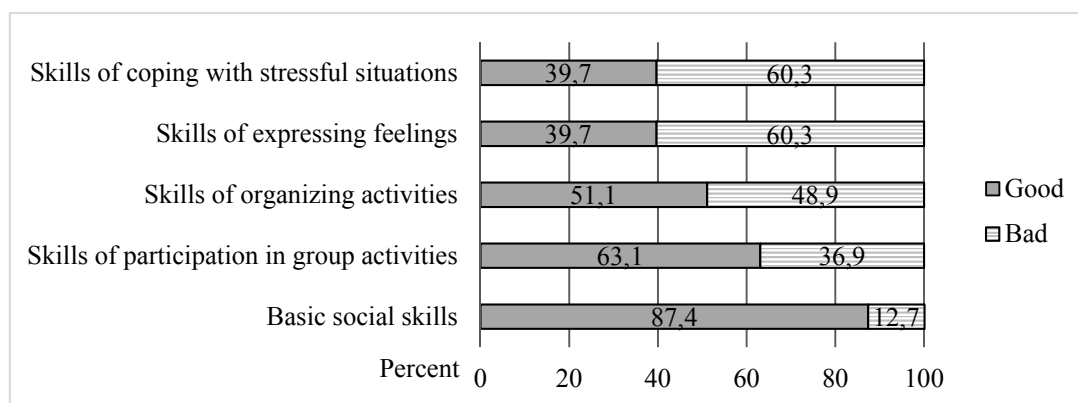
Figure 2. Opinions of students of grades 5-6 on their possessed social skills, distribution.

Having analysed the data of students' questionnaires, we see that students assess their basic skills (87.4 percent), skills of participation in group activities (63.1 percent) and skills of organizing activities (51.1 percent) as good; however, skills of expressing feelings (60.3 percent) and skills of coping with stressful situations (60.3 percent) are considered bad. In the opinion of teachers (Table 1), students of grades 5-6 who have strong social skills have good skills of organizing activities as well (ρ = 0.538, p <0.05). Skills of participation in group activities correlate strongly with skills of organizing activities (ρ = 0,659, p <0.05) and skills of expressing feelings (ρ = 0.540, p <0.05). The respondents whose skills of expressing feelings are strong have strong skills of coping with stressful situations (ρ = 0.615, p <0.05), too. According to the research data, we can state that the listed social skills strongly correlate with each other and thus create preconditions for development of social competences.

Table 1

Correlation matrix of social skills in students of grades 5-6 (teachers' opinion)

Social skills	Basic social skills	Skills of participation in group activities	Skills of organizing activities	Skills of coping with stressful situations
Basic social skills		0.226	.538*	0.513
Skills of participation in group activities	0.226		.659*	0.282
Skills of organizing activities	.538*	.659*		0.177
Skills of expressing feelings	0.323	.540*	0.391	.615*
Skills of coping with stressful situations	0.513	0.282	0.177	

Note: * – p< 0.05; ** – p<0.01.
   ρ – *Spearman's rank correlation coefficient*
   p – significance level

Correlation matrix of social skills self-assessment of students of grades 5-6 is presented in Table 2. We see that skills of participation in group activities correlate with skills of organizing activities (ρ = 0.411, p <0.01). Moreover, there is a significant correlational relationship between skills of coping with stressful situations and basic social skills (ρ = 0.236, p <0.01). Predicting the reasons of stress and knowing how it affects us allows us to try to avoid stress or to cope with it in the most constructive way (Gailienė, Bulotaitė, 1996).

According to A. Juodaitytė (2002), successful learning, ability to perform different tasks qualitatively as well as to perceive results of your activities impact the development of the child's social competence. Therefore, when assessing social competences, it is also important to find out the students' opinion. It turned out (Figure 3) that technology lessons help 40.9 percent of the students participate in various activities and 36.9 percent of the respondents get to know their classmates better.

Table 2

Correlation matrix of social skills self-assessment of students of grades 5-6

	Basic social skills	Skills of participation in group activities	Skills of organizing activities	Skills of coping with stressful situations
Basic social skills		0.106	0.066	.236**
Skills of participation in group activities	0.106		.411**	0.081
Skills of organizing activities	0.066	.411**		.129*
Skills of coping with stressful situations	.236**	0.081	.129*	

Note: * – p< 0.05; ** – p<0.01.
           ρ – *Spearman's rank correlation coefficient*
           p – significance level

Efficient communication by J.S. Almonaitienė is also inseparable from ability to combine different our own and communication partners' needs and aims (Vasiliauskaitė, Lekavičienė, 2010). Technology lessons help a smaller number of respondents (17.2 percent) be more polite and overcome problems, and a very small number (6.8 percent.) of the students mentioned that these lessons help them express their feelings.
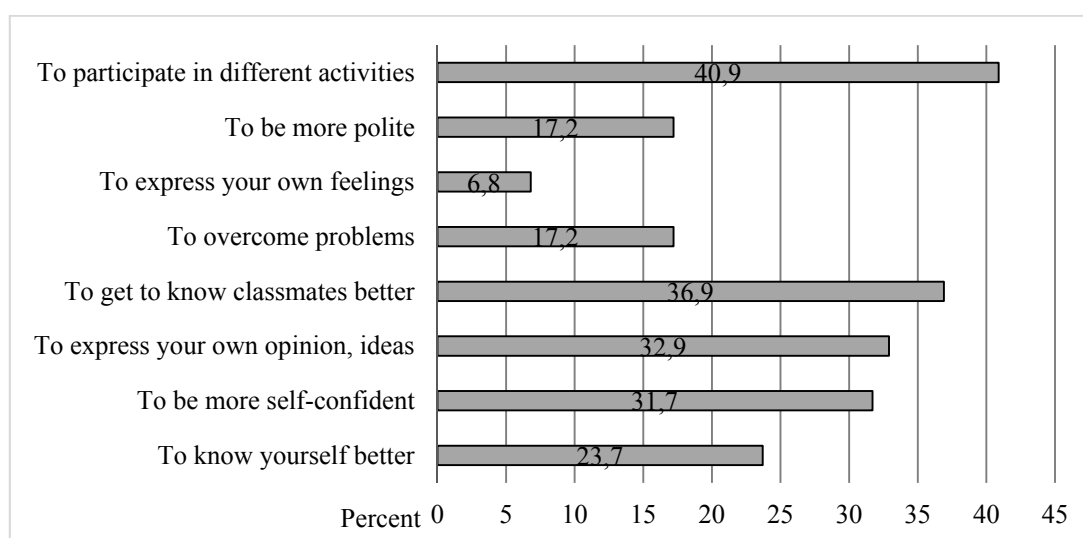
Figure 3. Opinion of students of grades 5-6 on what components of social competence technology lessons help them develop, distribution.

Having analysed social competence development matrix of students of grades 5-6 (Table 3), strong correlational relationships were established. The students who state that technology lessons help them know themselves better also help them express their own feelings ($\rho = 0.340$, $p < 0.01$). Ability to know and assess their own character as well as their strengths and weaknesses helps people while communicating and allows them to predict their own behavior in stressful situations (Gailienė, Bulotaitė, 1996). The respondents who indicated that lessons help them be more self-confident are capable of overcoming problems ($\rho = 0.302$, $p < 0.01$). There is a correlational relationship between the statement "to express your own feelings" and "to express your own opinion, ideas" ($\rho = 0.202$, $p < 0.01$) and "to be more polite" ($\rho = 396$, $p < 0.01$).

Having carried out the research, it turned out that there is a strong correlational relationship between self-cognition and expression of feelings as well as between self-confidence and problem solving.

Table 3

Matrix of social competence development in students of grades 5-6

	To know yourself better	To be more self-confident	To express your own opinion, ideas	To get to know classmates better	To overcome problems	To express your own feelings	To be more polite	To participate in different activities
To know yourself better		.180**	.149**	.143**	.244**	.340**	.263**	-0.008
To be more self-confi-dent	.180**		0.1	0.096	.302**	.264**	.197**	.186**
To express your own opinion, ideas	.149**	0.1		-0.02	.270**	.202**	.114*	.136*
To get to know class-mates better	.143**	0.096	-0.02		0.056	.301**	.208**	0.038
To over-come prob-lems	.244**	.302**	.270**	0.056		.331**	.137*	0.101
To express your own feelings	.340**	.264**	.202**	.301**	.331**		.396**	.124*
To be more polite	.263**	.197**	.114*	.208**	.137*	.396**		0.051
To partici-pate in different activities	-0.008	.186**	.136*	0.038	0.101	.124*	0.051	

Note: * – p< 0,05; ** – p<0,01

ρ – *Spearman's rank correlation coefficient*

p – significance level

The current generation of students needs such educational methods that are focused on problem solving, modern technologies and foster students' independence and creativity, create conditions for the learner to learn how to think and learn, reflect topical issues of nowadays society and change of information (Miškinienė, 2012). For social education, the methods demanding a child's activity and participation are applicable: conversations, discussions, interviews, group projects, simulation of the observed situations, role-plays, etc. Therefore, we tried to find out what methods technology teachers use in their lessons. 50 percent of the teachers' state that they use assessment, self-assessment and project methods, which help to develop the students' basic social skills; 50 percent of the teachers claim that the method of role-play is the most efficient one in developing skills of expression of feelings. 57 percent of the teachers' state that learning in groups facilitate developing participation in group activities skills in students of grades 5-6. Even 92.9 percent of the teachers do not completely use heuristic method of teaching, 64.3 percent of them do not apply "Icebreaker" method and 50 percent of the teachers do not use "Aquarium" method.

Both groups of respondents were asked about the frequency of the use of self-evaluation and group work methods. Technology teachers (64.3 percent) claimed that they always or often use a self-assessment method; however, just 48.3 percent of students of grades 5-6 stated that. 78.6 percent of the teachers indicated that they always or often use a method of group work whereas only 38.5 percent of the students gave a positive answer to that question. Therefore, we can assume that students are not always able to understand the method used by teachers, which, according to K. L. Thompson (Thompson, Bundy, 1996), hinders students' ability to summarize the newly acquired experience and apply it in various life situations.

Conclusions

- The results of the research demonstrated that according to the opinion of the teachers technology lessons are perfect for development of students' social competence. The results of the students' survey revealed that technology lessons are helpful for development of self-confidence, communication skills as well as skills of participation in various activities.
- The analysis of the students' and technology teachers' questionnaires showed that social competence of most students of grades 5-6 is of a sufficiently good level. The students who claim that technology lessons help them know themselves better and be self-confident, express their opinion, participate in various activities also note that these lessons help them express their own feelings and overcome problems.
- The analysis of the research data demonstrated that assessment and self-assessment, projects, situational games and brainstorming methods help students develop basic social skills and social competences. These methods as well as group learning, discussion methods help them develop skills of participation in group activities and organizing activities.

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Life Quality in the Context of Home Environment, Home Economics, Household, Consumer Science, Visual Art

A Model for Simulation of Study Process Optimization in Rural Areas

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Abstract: Europe including Latvia is facing enormous socio-economic and unprecedented demographic challenges in the context of volatility, uncertainty, complexity and ambiguity. In the light of these challenges, higher education in rural areas is struggling to adopt the best approach, pursuing efficiency in the organisation of the study process. Therein, optimization of the study process in higher education within rural areas such as a lecture room of a proper size, staff to be employed, etc. has attracted a lot of attention. In order to optimize the study process in an efficient way, a simulation model is required. Models which concentrate only on the students' probability are not exact enough to describe the study process. A new simulation model based on binary students' behavior should reflect both criteria such as students' probability as well as concentration in the study process. The research question is as follows: How can the study process based on binary student behavior be realistically modeled via gap processes? The aim of the research is to carry out mathematical analysis of gap processes underpinning elaboration of a simulation model of optimization of the study process based on binary student behaviour in higher education within rural areas. The meaning of the key concepts of *study process optimization*, *binary student behaviour, model* and *gap* is studied. For the analysis of this issue, the synergy between higher education, business and telecommunications can be used as the phenomenon of the study process based on binary student behavior as well as bit-errors in data transmission appear to be of a similar nature, namely, the bursty nature. Such models that describe the bursty nature of bit-errors in data transmission have been successfully implemented in telecommunications for optimizing data communication protocols and will be adopted in this work to the study process in higher education within rural areas. The novelty of this paper is presented in the new model that allows a realistic description of binary student behavior based on gap processes.

Keywords: study process optimization, binary student behaviour, model, gap, higher education.

Introduction

Europe including Latvia is facing enormous socio-economic and unprecedented demographic challenges, including regional disparities, aging populations, high rates of low-skilled adults and of youth unemployment, low birth rates, changing family structures and migration (Lifelong Learning…, 2008, 4) in the context of volatility, uncertainty, complexity and ambiguity. In the light of these challenges, higher education in rural areas is struggling to adopt the best approach, pursuing efficiency in the organisation of the study process. Therein, optimization of the study process in higher education within rural areas such as a lecture room of a proper size, staff to be employed, etc. has attracted a lot of attention.

In order to optimize the study process in an efficient way, a simulation model is required. Such simulation models have been developed for business planning and economic forecasting (Erdman, 1993). It should be noted that higher education is adopting a business model as well considering the students to be clients or customers. These simulation models for business planning and economic forecasting (Erdman, 1993):

- on the one hand, focused on nonlinear and simultaneous relationships as well as dynamic processes,
- on the other hand, used such economic indicators as the gross national product as business planning is closely related with the economic system.

Analysis of the simulation models for business planning and economic forecasting revealed that these simulation models focused on the process dynamism:

- on the one hand, do not take into consideration the bursty nature of phenomenon,
- on the other hand, use indicators that show phenomenon's developmental dynamism rather than criteria that serve to structure, assess and evaluate (Špona, Čehlova, 2004, 88).

Therein, a simulation model for optimization of the study process in higher education within rural areas is of great research interest.

For the creation of a new simulation model, such an everyday situation is considered as students have to solve an issue formulated already in 1603 by William Shakespeare (1564-1616) in his play *Hamlet* such as "To be, or not to be" (Shakespeare, 1825). Regarding a modern interpretation of students' contemporary problems, Shakespeare's words may sound as "to study, or not to study". It should be noted that "to study, or not to study" is considered as binary student behavior.

Binary students' behavior influences the organization of the process of higher education. Figure 1 shows a typical scenario in which visiting a lecture by students is highlighted (represented by "x") among the students who are potential visitors of this lecture (represented by "-").

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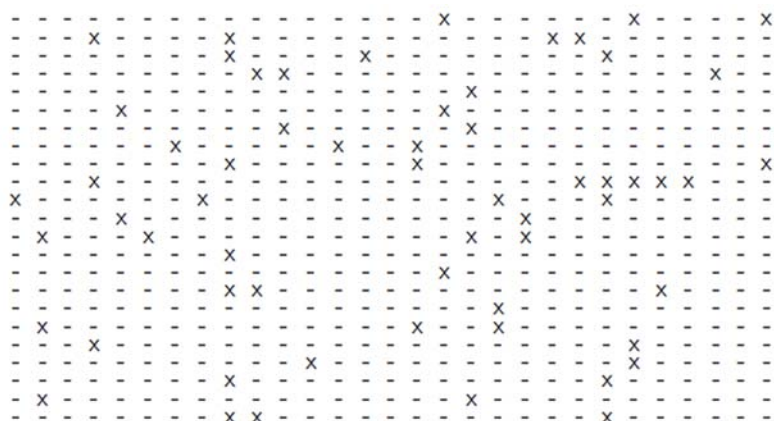
Figure 1. Simulated lecture visits by the students (represented by "x") among potential lecture visitors (represented by "-").

However, the students can be more independently distributed over e.g. a lecture or they can appear really concentrated as highlighted in Figure 2.

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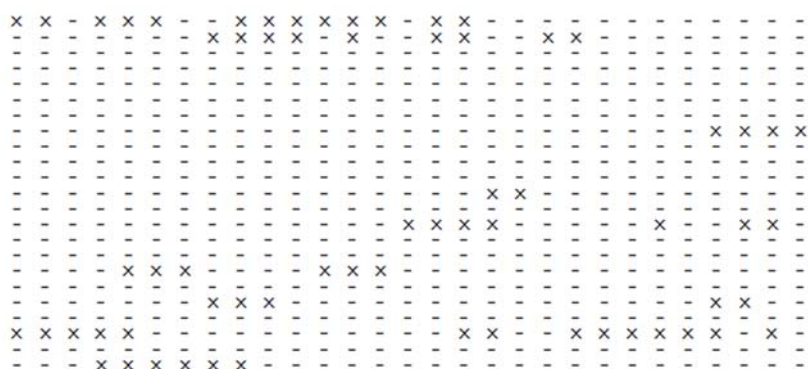
Figure 2. Simulated bursty nature of the students who visit a lecture (represented by "x") among potential lecture visitors (represented by "-").

In general, the students' probability can serve as a clear criterion of how often students decide to visit a lecture. However, the students' probability does not deliver any information about how concentrated this process is. In situations, where binary decisions in higher education are made such as visiting a lecture, not only the event of students' visiting a lecture is of any interest but also how concentrated students are to visit a lecture. That is why models which concentrate only on the event of students' visiting a lecture with a given probability are not exact enough to describe the study process.

Models which concentrate only on the students' probability are not exact enough to describe the study process. A new simulation model based on binary students' behavior should reflect both criteria such as students' probability as well as concentration in the study process. The research question is as follows: How can the study process based on binary student behavior be realistically modeled via gap processes?

The aim of the research is to carry out mathematical analysis of gap processes underpinning elaboration of a simulation model of optimization of the study process based on binary student behaviour in higher education within rural areas.

The novelty of this paper is presented in the new model that allows a realistic description of binary student behavior based on gap processes.

Methodology

The meaning of the key concepts of *study process*, *binary student behaviour, model* and *gap* is studied.

For the analysis of this issue the synergy between higher education, business and telecommunications can be used as the phenomenon of students in the study process as well as bit-errors in data transmission appear to be of a similar nature, namely, the bursty nature. It should be noted that by bursty nature of phenomenon, intervals of high-activity alternating with long low-activity periods within a fat-tailed inter-event time distribution is meant (Karsai, Kaski, 2012). Such models that describe the bursty nature of bit-errors in data transmission have been successfully implemented in telecommunications for optimizing data communication protocols and will be adopted in this work to the study process in higher education of rural areas.

The interpretive paradigm was used in the present study. The interpretive paradigm aims to understand other cultures, from the inside through the use of ethnographic methods such as informal interviewing and participant observation, etc. (Taylor, Medina, 2013). Interpretative paradigm is characterized by the researcher's practical interest in the research question (Cohen, Manion, 2007). The researcher is the interpreter.

Exploratory research was employed in the empirical study (Phillips, 2006). Exploratory research employed in the empirical study is aimed at generating new questions and hypothesis (Phillips, 2006). The exploratory methodology proceeds from exploration in Phase 1 through analysis in Phase 2 to a new research question/hypothesis development in Phase 3.

The present contribution involves theoretical methods such as analysis of theoretical sources and modelling.

Results and discussion

This section starts with the conceptual framework for simulation of study process optimization based on binary student behavior.

By model, a pattern of individual's or individuals' interpretation of a phenomenon is meant. Models can be presented in a variety of forms such as verbal, graphic, computer, etc. A model can be characterized as demonstrated in Figure 3. The model characteristic is described by parameters such as the students' probability and the students' concentration.
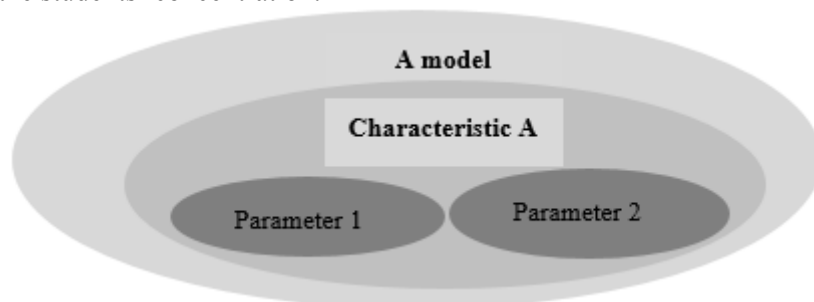

Figure 3. Model elements, where parameter 1- the students' probability; parameter 2- the students' concentration.

By a parameter, definable, measurable, and constant or variable characteristic, dimension, property, or value, selected from a set of data (or population) to understanding a situation (or in solving a problem) is understood (Business Dictionary, 2015).

In turn, simulation model is identified as patterns of the management of phenomenon change in real-world situations. A simulation model should map the characteristic of the real world process with the required precision. The real world process in this work refers to study process that includes lecture visit, etc. where binary decisions are made.

In the study process, the bursty nature of the students is taken into consideration. Taking the bursty nature of students into account, the students' ratio is not any longer sufficient to describe the characteristic of the study process. The students' ratio (in the following referred to the students' probability p_e) is defined as the number of students entering e.g. a lecture room divided by the number of students who are potential lecture visitors. Here, using a model with only one parameter is difficult to project the real students' characteristic onto the parameters of the model. This leads undoubtedly to an inaccuracy between the model setup and the real world characteristics. Hence, an additional parameter has to be introduced to describe the concentration of students in the study process in higher education.

Within the binary decision paradigm, study process in higher education is a success, if the process receives an outcome, for example a certificate of participation in a lecture. Gap in the present contribution means no lecture visit by a student from potential lecture visitors, in other words, without the outcome. By a gap process, the students' concentration as well as the students' probability can be taken into account in a realistic way. Therein, the gaps between two lecture visits are assumed to be statistically independent from each other.

Figure 4 highlights the theoretical basis for the new simulation model, where the study process is described by gap-processes and illustrates the process between two lecture visits, i.e. how often students visit a lecture and how concentrated they appear. For the optimization of study process related parameters e.g. the expected time between two students a simulation model such as the proposed one can be helpful.
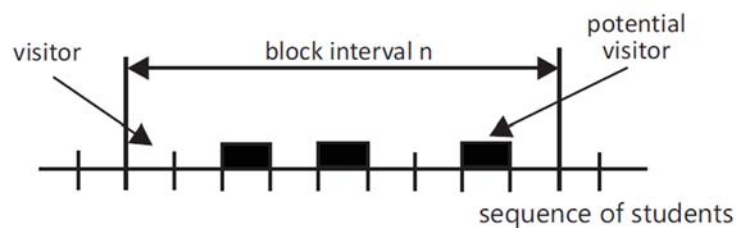
Figure 4. Students' gap for describing binary students' behavior.

Analyzing the students' characteristic, we can define a block interval *n* (identified as the probability $p_B(n)$) where at least one student appears. The parameter *n* refers e.g. to the total number of students entering a lecture room in a given time e.g. Choosing the parameter *n = 1* the probability $p_B(n)$ equals the students' probability p_e.

Now we can assume that the probability $p_B(n)$ can be described as a function of the students' probability p_e and the block interval length n (Formula 1). Here the following approximation is used (Wilhelm, 1976; Ahrens, 2000).

$$p_B(n) = \begin{cases} p_e \cdot n^\alpha & 1 \leq n \leq n_0 \\ 1 & n > n_0 \end{cases}. \tag{1}$$

The value α denotes the linear dependence between $\log_{10} p_B(n)$ and $\log_{10} n$ and is a measure for the students' concentration (also referred to the concentration of lecture visit). The value of n_0 indicates the maximum block length to which the linear-dependence can be maintained (Figure 5).

Figure 5. Relationship between the probability $p_B(n)$ and the block interval n for different parameters of the $(1 - \alpha)$ at a student's probability of $p_e = 10^{-2}$.

The analysis of concentration parameters $(1-\alpha)$ (referred to the concentration of lecture visit) has shown that parameters in the range of 0.0 until 0.5 describe realistic scenarios. Thereby, a parameter $(1-\alpha)=0$ describes the situation where the students appear independently distributed from each other. With increasing parameter $(1-\alpha)$ the students appear more and more concentrated and the probability $p_B(n)$ decreased for a given n. With the assumption that the distances (gaps k) between neighboring students are statistically independent from each other, the students' characteristic, namely the occurrence of bursty students, is defined by the students' gap-distribution function $u(k)=P(X \geq k)$ which describes the probability of a gap larger than k. The setup:

$$p_B(n) = \begin{cases} p_e \cdot \sum_{k=0}^{n-1} u(k) & 1 \leq n \leq n_0 \\ 1 & n > n_0 \end{cases} \tag{2}$$

is used to develop the student's gap distribution function $u(k)$ for the students' gaps step by step. Comparing Formulas (1) and (2), one gets (3):

$$\sum_{k=0}^{n-1} u(k) = n^\alpha \quad 1 \leq n \leq n_0 \tag{3}$$

and for the searched error-gap distribution $u(k)$ we yield:

$n = 1$	:	$u(0)$	$= 1^\alpha$
$n = 2$	:	$u(0) + u(1)$	$= 2^\alpha$
$n = 3$	:	$u(0) + u(1) + u(2)$	$= 3^\alpha$
…	:	…	$= …$
$n \leq n_0$	:	$u(0) + u(1) + \cdots + u(n - 1)$	$= n^\alpha$.

The student's-gap distribution function $u(k)$ can be defined as follows:

$$u(k) = \begin{cases} (k + 1)^\alpha - k^\alpha & 0 \leq k < n_0 \\ 0 & k \geq n_0 \end{cases} . \tag{4}$$

Re-writing of $u(k)$ leads to the student-gap density function $v(k) = P(X = k)$, which describes the probability of a gap X equal to k:

$$u(k) = v(k) + v(k + 1) + v(k + 2) + \cdots$$

$$u(k + 1) = v(k + 1) + v(k + 2) + \cdots$$

and by calculating the difference between $u(k)$ and $u(k + 1)$ the student-gap density function $v(k) = P(X = k)$ can be obtained:

$$v(k) = u(k) - u(k + 1) . \tag{5}$$

Assuming that the students are independently distributed, i.e. $(1 - \alpha) = 0$, and using equation (4) and (5) one gets the following result (6) for the student-gap density function $v(k)$:

$$v(k) = \begin{cases} 1 & k = (n_0 - 1) \\ 0 & k \neq (n_0 - 1) \end{cases}. \qquad (6)$$

With this result, the disadvantage of the model setup becomes evident. The model setup defined in (1) leads to a deterministic student-gap process. In situations, where the students appear concentrated, i.e. $(1 - \alpha) > 0$, one can also find an enlarged value at $v(n_0 - 1)$. This error leads to engraving inaccuracies in the simulation process. The reason is the discontinuity at $n = n_0$ in equation (1). A modification of this model setup is necessary. The following solution can be assumed: the linear increases of $\log_{10} p_B(n)$ can only be accepted for small parameters of n. The value of $\log_{10} p_B(n)$ has to change steadily into the value $\log_{10} p_B(n) = 0$ for larger n. To the minimization of the model inaccuracy at $v(n_0 - 1)$ equation (4) has to be multiplied by the value $e^{-\beta \cdot k}$ (Phillips, 2006). For the student-gap distribution function $u(k)$ the following expression arises:

$$u(k) = ((k+1)^\alpha - k^\alpha) \cdot e^{-\beta \cdot k} \quad 0 \leq k \leq \infty$$

with

$$\lim_{k \to \infty} e^{-\beta \cdot k} = 0 \qquad \beta > 0$$

and

$$\beta \approx p_e^{1/\alpha}.$$

Figure 6 illustrates the student-gap distribution function $u(k)$ for different parameters $(1 - \alpha)$ assuming a student's probability of $p_e = 10^{-2}$.
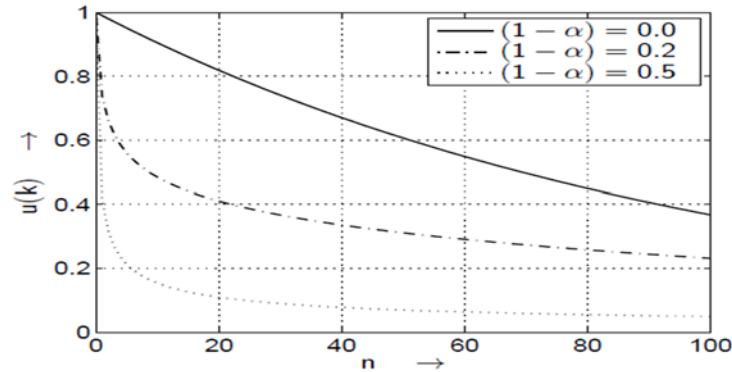
Figure 6. Student-gap distribution function u(k) for different parameters of the $(1 - \alpha)$ at a student's probability of $p_e = 10^{-2}$.

The resultant student-gap density function $v(k)$ is depicted in Figure 7.
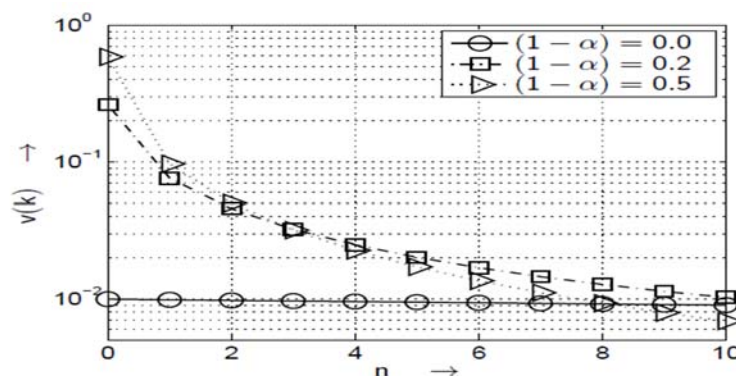
Figure 7. Student-gap density function v(k) for different parameters of the $(1 - \alpha)$ at a student's probability of $p_e = 10^{-2}$.

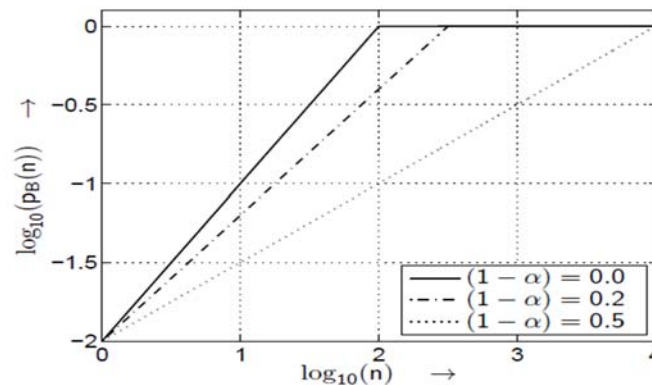Finally, the proposed system setup is highlighted in Figure 8.
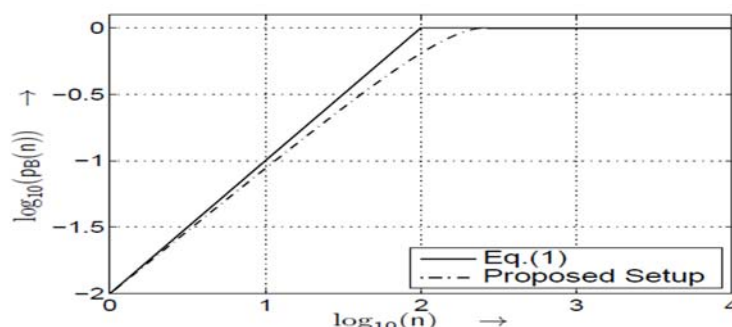
Figure 8. Approximated relationship between the probability $p_B(n)$ and the block interval n for different parameters of the $(1 - \alpha)$.

Now, the students' characteristic can be modelled by two parameters (the student's probability p_e and the student's concentration value $(1 - \alpha)$).

With the assumption that the distances between neighboring students are statistically independent from each other the model characteristic is described completely by the student's distribution function $u(k)$. For the creation of the gap processes a uniformly distributed random number Y is identical to the function $u(k)$ and the corresponding value of the student's gap is determined. For this, the following equation

$$Y \equiv u(k) \qquad (6)$$

has to be solved numerically.

Conclusions

The theoretical findings on the inter-relationship between *the bursty nature of students* and *gap processes* allow determining such criteria for optimization of study process based on binary student behaviour as *students' probability* and *concentration.*

A new research question has been put forward: What are advantages and disadvantages of the model for simulation of study process optimization based on binary student behaviour in higher education?

The present research has limitations. The inter-connections between *simulation model, binary student behaviour, the bursty nature of students* and *gap processes* have been set. Another limitation is the theoretical analysis carried out only. Nevertheless, the results of the research, namely the newly defined research question, may be used as a basis of the promotion of the model for simulation of study process optimization based on binary student behaviour in higher education within rural areas.

Further research tends to search for relevant methods, tools and techniques for evaluation of the simulation model. Future research proposes to analyse the implementation of the simulation model characterized by two criteria such as students' probability and concentration. A comparative study of use of the model for simulation of study process optimization based on binary student behaviour in different rural areas could be carried out, too.

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Student's habits related to fruits and vegetables and their determinants

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Abstract: The aim of the study was to determine the importance of students' nutritional knowledge and preferences in determining their habits related to fruits and vegetables. The survey was conducted in December 2014 among 247 students of the first and final year of study on nutrition sciences at the Warsaw University of Life Sciences. Participants' nutritional knowledge, frequency of consumption of the various groups of vegetables and fruits, preferences, and socio-demographic characteristics were assessed. Frequency analysis, multi-way tables, Chi square and the U Mann-Whitney tests were performed. Significance of the differences was determined at $p \leq 0,05$. The level of nutrition knowledge was assessed as satisfying. The final year students had significantly higher levels of nutritional knowledge than the ones beginning their studies. The nutritional knowledge significantly differentiated the frequency of consumption of certain vegetables and fruits. The higher was the level of nutritional knowledge, the more often respondents ate dried fruit, root vegetables, nightshade plants and frozen vegetables. The nutritional knowledge had no effect on how many times fruits and vegetables were consumed during the day. The differences in the consumption of fruits and vegetables were also demonstrated after taking into account the socio-demographic situation and preferences for individual groups of products. A significant impact of nutritional knowledge on the consumption of some vegetables and fruits within a group of students confirms the importance of nutritional education for students, not just the ones studying in the fields that include this knowledge in the program of the studies.

Keywords: students, nutritional knowledge, fruits, vegetables, consumption, higher education.

Introduction

Proper nutrition is based on providing adequate amounts of all essential nutrients for the body as well as providing energy as needed depending on age, sex, physical activity and physiological state. The choice of food and the frequency of its consumption vitally impact the proper satisfaction of the needs of the body and can reduce the risk of many diseases (Wang, Li, 2014). Vegetables and fruits constitute one of the most important food groups. They are good sources of among other things vitamins, minerals and fiber in the diet. In order to improve the general health of the population and to reduce the risk of certain non-infectious diseases World Health Organization recommends consumption of 3 - 5 servings of vegetables and 2 - 4 servings of fruit a day, which makes 400 - 500 g of fruit or vegetable daily except for potatoes and other tubers rich in starch (Fruits and vegetables... 2004). The research shows, however, that almost half of the EU citizens do not meet the recommendations for consumption of vegetables and fruits in the amount of 400 grams per day per person. The largest intake of fruits and their products per capita was recorded in Luxembourg, Ireland, Austria, Greece and Italy, and the lowest in Bulgaria, Latvia, Romania, Slovakia and Poland (Fruit and vegetable…, 2012). The already existing research showed that among the youth the consumption of fruit and vegetable was also insufficient in comparison to dietary guidelines (Kowalska, 2010; Larson, Neumark-Sztainer, 2007; Pearson, Biddle, 2009).

Studying tends to alter the nutritional behaviors as a result of lifestyle changes at times accompanied by the change of the place of residence. The diet of the students is also affected by their financial situation, the offer of the universities' canteens, individual tastes and the level of nutritional knowledge. The lifestyle of students is characterized by irregularity, intensive studying and, increasingly, gainful employment linked with the fast pace of life. All the aforementioned factors contribute to irregular diet, including adverse changes in the consumption of fruit and vegetables. People with higher education are often recognized in society as a model of healthy behavior. Due to their subsequent modeling impact it is necessary to implement healthy nutritional behaviors among students. Dietary preferences bear vital importance among the factors determining the choice of food and its consumption – simultaneously they often consolidate deficiencies in the diet (Szczęsna, Wojtala, 2005). On the contrary nutritional knowledge is regarded as a factor contributing to the occurrence of recommended behaviors.

Understanding the relation between those factors and eating behaviors is important from the perspective of organizing the education on nutrition for students.

The aim of the study was to determine the importance of students' nutritional knowledge and preferences in determining their habits related to fruits and vegetables.

Methodology

The survey was conducted in December 2014 among 247 students of the Faculty of Human Nutrition and Consumer Sciences, Warsaw University of Life Sciences in Poland. In the study group 128 respondents (52.2%) were in the final year (fifth year of university), and 119 respondents (47.8%) in the first year of studies. Women accounted for 90% of the study population. More than half of respondents (51.4%) came from cities with over 50 thousand residents, 23.1% from towns up to 50 thousand residents and 25.5% from the rural environment. Almost half of the respondents (48.6%) declared that while studying they live in their family home, others live in a rented room or apartment (27.1%) or in a dormitory (24.3%). The vast majority of respondents (78.2%) assessed their financial situation as average, about 1/5 of the respondents (19.0%) as above average, and 2.8% as below average.

The assessment of nutritional knowledge was conducted using the Nutritional Knowledge Scale (Kwestionariusz do..., 2014). The scale contains 25 statements about food and nutrition with the possibility to respond: "I do not agree", "I agree" or "I do not have an opinion". The usual frequency of consumption of vegetables, ie. roots (eg. carrots, parsley, radish), cucurbits (eg. cucumber, pumpkin, zucchini), brassica and leaf vegetables (eg. cabbage, broccoli, lettuce, spinach), solanaceous vegetables (eg. tomato, peppers), potatoes, legumes and frozen vegetables, and fruits (local, southern, frozen, dried) was expressed on the 6 – point scale, where: 1 – never, 2 – less often than once a week, 3 – once a week, 4 – 3 - 4 times a week, 5 – once a day, 6 – several times a day. In addition, study participants indicated the number of servings of fruits and vegetables they consumed during the day. Preferences of the participants considering different groups of vegetables and fruit were shown on a 5-point hedonic scale, where: 1 – I strongly dislike it, 2 – I do not like it, 3 – I neither like nor dislike it, 4 – I like it, 5 – I like it very much. The socio-demographic situation of students was characterized in terms of three traits, namely: the place of origin (rural environment, city below 50 thousand residents, the city over 50 thousand residents), place of residence during the studies (family home, dormitory, rented room or apartment, others) and declared financial situation (below average, average, above average).

Statistical analysis was performed using Statistica StatSoft 10.0 GB. During the assessment of nutritional knowledge, in the case of individual statements for each correct answer („agree" or „disagree") the respondent obtained 1 point and 0 points for an incorrect answer or „no opinion". Then, based on the total number of points obtained the subjects were separated into three groups: characterized by insufficient nutritional knowledge (0 - 8 points), satisfactory knowledge (9 - 16 points) and a good nutritional knowledge (17 - 25 points). During the statistical analysis the frequency analysis was performed and cross-tables were used. The test of the significance of differences between groups for categorical variables was performed using a Chi-square test. Comparison of the nonparametric features was performed with Mann-Whitney U test (U MW) or Kruskal-Wallis test (KW). Spearman's rank correlation coefficient (rho) was applied to describe the strength of dependence between the two variables described using ordinal scales. The significance of differences was determined at $p \leq 0.05$.

Results and Discussion

More than a half of the respondents had knowledge about nutrition on a good level, while approximately 2/5 of people – on a sufficient level. Significantly more students in their final year of studying in comparison with those of the first year were characterized by a good level of nutritional knowledge. However, significantly more first-year students had sufficient knowledge of nutrition. Similar differences in nutritional knowledge of students in the fields related to food, nutrition and medicine has been indicated in other studies (Kołłajtis-Dołowy, 2010; Wyka, Żechałko-Czajkowska, 2006). The percentage of people with insufficient knowledge of nutrition was small and there were no differences found after taking into account the year of studies (Table 1).

Table 1

Structure of respondents with their level of nutritional knowledge and the year of their university career (%)

Level of nutritional knowledge	First year of studying	Last year of studying	Total population
Insufficient	4.2	0.0	2.0
Sufficient (IS)	72.3	14.1	42.1
Good (IS)	23.5	85.9	55.9

IS – statistically significant differences at p<0.05
Source: own research

The degree of preference for seven groups of fruits and vegetables proved to fit in the range 4.0 - 5.0, which means the participants liked the products. The local and southern fruits proved to be the most popular (mean value ≥ 4.5). The nightshade plants, root vegetables, brassicas and leaf vegetables, and cucurbits were all among the popular products (mean value of 4.0 - 4.4). The dried fruits, potatoes and legumes were less appreciated (mean value of 3.5 - 3.9). The lowest preferences were declared for frozen vegetables (3.4 ± 1.0) and frozen fruit (3.2 ± 0.9) (Table 2).

Table 2

The preferences for fruits and vegetables within the study population (%)

Products	Respondents' preferences*					X ± SD**
	1	2	3	4	5	
local fruits	0.0	0.8	2.8	44.6	51.8	4.5 ± 0.6
southern fruits	0.0	1.2	2.8	38.9	57.1	4.5 ± 0.6
frozen fruits	4.5	18.6	38.1	34.8	4.0	3.2 ± 0.9
dried fruits	6.9	11.4	19.1	46.3	16.3	3.5 ± 1.1
root vegetables	0.0	1.6	11.7	66.8	19.8	4.0 ± 0.6
cucurbits	1.2	2.8	15.0	58.3	22.7	4.0 ± 0.8
brassicas and leaf vegetables	0.8	2.0	13.0	57.9	26.3	4.1 ± 0.7
nightshade plants	0.8	0.8	4.9	47.8	45.8	4.4 ± 0.7
potatoes	1.2	7.3	24.7	49.4	17.4	3.7 ± 0.9
legumes	3.6	9.3	22.7	51.8	12.6	3.6 ± 0.9
frozen vegetables	5.3	13.0	29.6	43.3	8.9	3.4 ± 1.0

*the 5-point scale where: 1 - I strongly dislike it, 2 –I do not like it, 3 – I neither like nor dislike it , 4 - I like it, 5 – I like it very much.
** X - mean value; SD - standard deviation
Source: own research

Only in the case of preferences for potatoes and frozen vegetables differences were found between first and final year students. Final year students were fonder of potatoes (3.9 ± 1.0) and frozen vegetables (3.5 ± 0.9) compared with first year students (3.6 ± 1.0 and 3.2 ± 1.1).

The frequency of eating fruits and vegetables is presented in Table 3. Majority of respondents consumed nightshade plants (45.7%) and national fruits (38.1%) on daily basis (Table 3). Declared frequency of consumption of specific groups of fruits and vegetables was low. Only in the case of local fruits and nightshade vegetables the average frequency was slightly higher than 3-4 times per week (mean values> 4.0). However, in the case of frozen fruit and vegetables, legumes and dried fruits the average frequency of consumption was less than once a week (average value <3.0). Too rare consumption of fruits and vegetables in the population of Polish students was also demonstrated in other studies (Kowalska, 2010; Stefańska, Ostrowska, 2011).

Table 3

The frequency of consumption of vegetables and fruits within the study population (%)

Products	Frequency of consumption*						X ± SD**
	1	**2**	**3**	**4**	**5**	**6**	
local fruits	0.0	3.6	19.0	39.3	27.2	10.9	4.2 ± 1.0
southern fruits	0.4	10.5	27.1	43.3	15.5	3.2	3.7 ± 1.0
frozen fruits	23.9	64.0	7.6	4.5	0.0	0.0	1.9 ± 0.7
dried fruits	13.0	51.8	19.0	10.1	4.9	1.2	2.5 ± 1.1
root vegetables	0.0	8.5	29.1	39.7	16.2	6.5	3.8 ± 1.0
curcubits	0.0	19.0	35.2	33.2	7.7	4.9	3.4 ± 1.0
brassicas and leaf vegetables	0.8	13.4	40.9	30.4	9.2	5.3	3.5 ± 1.0
nightshade plants	0.4	3.6	12.6	37.7	25.5	20.2	4.5 ± 1.1
potataoes	2.8	20.2	31.2	38.9	6.9	0.0	3.3 ± 1.0
legumes	5.3	62.3	22.3	7.7	2.0	0.4	2.4 ± 0.8
frozen vegetables	8.1	48.2	27.5	13.0	2.0	1.2	2.6 ± 1.0

* 6-point scale, where 1 – never; 2 – less than 1 time per week; 3 – once a week; 4 – 3-4 times a week, 5 – once a day; 6 – several times a day
** X - mean value; SD - standard deviation
Source: own study

Final year students were characterized by significantly higher frequency ($p = 0.029$) of consuming frozen vegetables (2.7 ± 0.9) compared with the first year students (2.4 ± 0.9). In the case of the frequency of consumption of other fruits and vegetables there were no statistically significant differences found depending on the year of studying. However, the bigger was the city represented by the students, the more often they consumed cucurbit vegetables and nightshade plants (Table 4).

Table 4

The frequency of consumption of selected vegetables with regard of their place of origin

Products	Place of origin	X ± SD*	Significance
Curcubits	Rural environment	3.13 ± 0.98	0.009
	City below 50 thousand	3.61 ± 1.00	
	City above 50 thousand	3.52 ± 1.06	
Nightshade plants	Rural environment	4.05 ± 1.01	< 0.001
	City below 50 thousand	4.53 ± 1.02	
	City above 50 thousand	4.61 ± 1.12	

* X – mean value (6-point scale, 1 – never to 6 - several times a day); SD - standard deviation
Source: own study

People living in the family home consumed brassicas and leaf vegetables and potatoes more often. (Table 5).

Table 5

The frequency of consumption of selected vegetables and potatoes with regard to the place of residence while studying

Products	Place of residence	X ± SD*	Significance
Brassicas and leaf vegetables	Family home	3.65 ± 0.95	0.017
	Dormitory	3.25 ± 0.98	
	Rented room or apartment	3.40 ± 1.13	
Potatoes	Family home	3.47 ± 0.91	0.002
	Dormitory	3.15 ± 0.90	
	Rented room or apartment	3.00 ± 1.00	

* X - mean value (6-point scale, 1 - never to 6 - several times a day); SD - standard deviation
Source: own study

The higher was the level of nutritional knowledge of study subjects, the more often they ate dried fruit, root vegetables, nightshade plants and frozen vegetables. Nevertheless, the correlations between these variable were significant but week (Table 6).

Table 6

Coefficients of bilateral correlation between the level of nutritional knowledge and frequency of consumption of fruits and vegetables

Products	Level of nutritional knowledge	
	Coefficient of bilateral correlation	**Significance**
Dried fruits	0.19	0.003
Root vegetables	0.17	0.007
Nightshade plants	0.16	0.012
Frozen vegetables	0.18	0.004

Source: own study

There was no statistically significant relation indicated between the level of nutritional knowledge and the frequency of consumption of local and southern fruits nor frozen vegetables, cucurbits, brassicas and leaf vegetables, potatoes and legumes. Some researchers have shown that the higher level of knowledge is usually accompanied by a more healthy eating habits (Goryńska-Goldmann, Ratajczak, 2010; Kolodinsky, Harvey-Berino, 2007), but the lack of association between these variables was also observed in some research (Misiarz, Malczyk, 2013; Uramowska-Żyto, Kozłowska-Wojciechowska, 2004).

In the case of local fruits (r = 0.30), southern fruits (r = 0.24), frozen fruits (r = 0.32), dried fruits (r = 0.64), root vegetables (r = 0.20), cucurbits (r = 0.31), brassica and leaf vegetables (r = 0.22), solanaceous vegetables (r = 0.35), potatoes (r = 0.31), legumes (r = 0.45) and frozen vegetables (r = 0.60), it was indicated that the more preferred was a group of fruits or vegetables among the respondents, the more often products belonging to it were consumed. The strongest bilateral relation between preferences and frequency of consumption was observed for the two most rarely consumed groups of products, namely dried fruits and frozen vegetables.

Approximately 1/3 of the study population (33.6%) declared that they consume three servings of vegetables and fruits a day. Every fifth student consumed two (20.6%) or four (19.0%) servings of vegetables and fruits. More than 4 servings per day were consumed by 15.4% of respondents, and one serving by 11.4% of people. An insufficient number of servings of fruits and vegetables per day was also demonstrated in other studies (Larson, Neumark-Sztainer, 2007; Stefańska, Ostrowska, 2011, Wyka, Żechałko-Czajkowska, 2006). There were no significant differences indicated between the number of servings of vegetables and fruits consumed per day and the year of studying, the place of origin, the place of residence during the studies, the preferences, the nutritional knowledge of the respondents. However, other studies have shown that a greater percentage of people with higher level of nutritional knowledge ate at least five portions of fruits and vegetables a day, compared to those with lower levels of knowledge (Wardle, Parmenter, 2000).

Approximately 2/3 of the surveyed students ate fruits for lunch and 1/3 students for breakfast (Table 7).

Table 7

Structure of respondents with regard to the meals containing vegetables and fruit (%)

Product	Meal (%)					
	Breakfast	**Lunch**	**Dinner**	**Teatime**	**Supper**	**Snacks**
Fruits	30.0	61.9	4.5	13.0	16.2	11.7
Vegetables	55.1	23.9	93.5	36.4	71.7	1.7

The values do not add up to 100 because each respondent could have given more than one answer.
Source: own study

A small percentage of people eat fruits as a part of dinner. Vegetables are most often eaten for dinner, while 3/4 of respondents consumed them for dinner, and more than half of the respondents for breakfast. The others ate them during teatime or lunch (Table 7). Nevertheless, another research have shown that the vegetables were most often consumed during the main meals, rarely between meals, and fruits were regarded as snacks (Stefańska, Ostrowska, 2011).

Conclusions

The analysis indicated that:
- final year students had significantly higher levels of nutritional knowledge than ones who had just started their studies;
- nutritional knowledge of the respondents significantly differentiated the frequency of consumption of certain vegetables and fruits. Preferences declared in regard to different groups of vegetables and fruits determined the frequency of consumption of all groups of fruits and vegetables, though the strongest correlations were found for the least frequently consumed products;
- there were no differences indicated in the number of servings of fruits and vegetables consumed after taking into account the nutritional knowledge and respondents' preferences for these groups of products.

The significant impact of nutritional knowledge and preferences on eating some vegetables and fruits confirms the legitimacy of including this group of products in nutritional education for the general population. In the case of students, not just ones studying nutrition sciences where nutritional knowledge is included in the curricula, such education is of particular importance. Its aim should be to disseminate the knowledge taking into account the already established preferences for vegetables and fruits.

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Nutrition Habits of Technology and Business School Students

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Abstract: One of the tasks established in the Lithuanian Health Programme for 2014–2025 is to promote habits of healthy nutrition. Numerous studies of researchers focus on healthy nutrition as one of the key factors for a full-fledged life. The topic of nutrition habits is relevant to the people of all age and social groups. The goal of the research is to study nutrition habits of 16 to18 year-old students of The School of Technology and Business. To achieve the set goal theoretical (scientific literature) and empirical (questionnaire survey, semi-structured interviews) research methods were applied. 131 student of The School of Technology and Business at the age 16 to18 years (future chefs, car mechanics, logisticians-freight forwarders and furniture makers) and 5 teachers were surveyed. The obtained results revealed that the students have true knowledge about healthy nutrition, however insufficient. Future chefs possess more knowledge about healthy nutrition, although having compared nutrition habits of this group to the other ones, no significant differences were observed. The students have not formed the habit of regular eating, daily breakfast, not enough time is allocated for lunch. Most of them do not have a daily habit to drink water, eat fresh fruit and vegetables. The students check shelf life of the food products they buy; however, many of them are not interested in the composition of these products. The teachers who participated in the research noted that students analyse their nutrition habits insufficiently.

Keywords: nutrition habits, healthy nutrition, school of technology and business, school education.

Introduction

Nutrition is a relevant issue for all people, regardless of their age, activity or experience. It is especially important at a young age when proper eating habits are still developing. As the child grows, eating habits inevitably change because they are formed not by the family only but by the environment as well. Nutrition of young people aged16 to 18is often determined by personal decisions; however, that not always leads to healthy lifestyle and well-being. Young people often complain of fatigue, lack of energy, weight gain and other disorders. Actually, both physical and mental health of a growing person to a great extent depends, namely, on proper nutrition. Having examined nutrition habits of young people and their knowledge about proper eating, we would be able to answer these questions: whether nutrition recommendations reach food consumers, whether they are followed accurately and whether these recommendations are understandable and implemented by the people of the researched age group.

A large number of studies on healthy nutrition prove the relevance of this issue. Lithuanian researchers indicate healthy nutrition as one of the key factors for a full-fledged life. They highlight what healthy nutrition is and encourage assessing personal nutrition guidelines objectively. For instance, R. Stukas and G. Šurkienė (Stukas, Šurkienė, 2009) provide nutrition assessment guidelines, S. Bardauskienė (2008) emphasizes health and physical activity, E. Kriaučiūnienė (2007) states that nutrition is one of the essential components of healthy lifestyle, and A. Kirkutis (2007) as well as M. Miškinienė (2012) indicate components of healthy nutrition. R. Proškuvienė (2006) focuses on the importance of nutrition and movement in human life, R. Lažauskas (2005) notes that only the people who have healthy eating habits can feel and be healthy. S. Ustilaitė, V. Gudžinsienė and V. Juškelienė (Ustilaitė, Gudžinsienė…, 2004) provide answers to different questions relevant to adolescents, including the ones about the importance of healthy nutrition. R. Stukas (1999) concentrates on healthy nutrition, nutrients and their impact on the human organism, B. Mielkuvienė and I. Budrienė (Mielkuvienė, Budrienė, 1998) analyse nutrition as one of the aspects of healthy life, and V. Merkienė and N. Murauskienė (Merkienė, Murauskienė, 1998) stress the importance of nutrition.

G. Šurkienė and R. Stukas (Šurkienė, Stukas, 2003), R. Stukas (2010), L. Labanauskas, R. Rokaitė and R. Kučinskaitė (Labanauskas, Rokaitė…, 2008) have examined and assessed nutrition principles of children and adolescents in more detail.

The goal of the research is to study nutrition habits of 16 to18 year-old students of The School of Technology and Business.

Objectives:

1. To assess nutrition habits of 16 to18 year-old students of The School of Technology and Business.
2. To compare nutrition habits of different specialties students' of The School of Technology and Business.

Methodology

The research was carried out in 2014. In order to examine nutrition habits of 16 to18 year-old students of The School of Technology and Business, first of all, theoretical analysis of scientific literature on healthy nutrition was performed. According to the results of the analysis, a semi-closed questionnaire was designed. It consisted of a demographic block (data about the surveyed students: gender, age and body mass index (BMI). The first component is important seeking to determine whether there are differences between nutrition habits of men and women. The second one (BMI) should facilitate assessment of nutrition habits of the surveyed people. A block of closed-ended and open-ended questions is aimed at examining students' nutrition peculiarities. The questions are focused on eating habits, food products consumed, nutrition regime. Four groups of students were surveyed: future chefs, car mechanics, logisticians-freight forwarders and furniture makers.

The survey was carried out at a The School of Technology and Business in one of the districts of Lithuania. The head of the school, teachers and students participating in the research were introduced to the goal and the course of research. The respondents took part in the study voluntarily and anonymously. Totally,131 students, 62 girls and 69 boys, participated in the survey: future chefs (50 girls and 15 boys), car mechanics (29 boys and 1 girl), logisticians-freight forwarders (11 boys and 9 girls) and furniture makers (14 boys and 2 girls). The respondents received the survey questionnaires and instructions how to fill them out. The students were requested to answer the questions honestly and independently. The time for answering the questions was not limited. The results are presented in diagrams using Microsoft Office Excel 2010.

To supplement the research data, a semi-structured interview was carried out. Five teachers of this school (3 women and 2 men) took part in the research, too.

Results and discussion

The answers of the respondents had to form a clear answer to the main research questions: whether nutrition habits of the researched students meet healthy nutrition principles formed by scientists and whether the chosen field of study impacts students' nutrition.

In order to find out whether body weight of the respondents is normal, they were asked to indicate their body mass index (BMI). 83 % of the students indicated that their BMI was normal, i.e. from 18.5 to 24.9. 11 % of the students were overweight (BMI was from 25 to 29.9) where as 5 % of them were underweight (BMI <18.5). There was only 1 % of the students whose BMI was over 40 (morbid obesity). The obtained data demonstrate that BMI of the majority of the surveyed students is normal. It shows that their lifestyle and nutrition habits are not bad. Although there are studies which establish that BMI of more than one-third of the surveyed students is higher than normal (Flegal, Carrol…, 2012), however, the results of this research demonstrated that body mass index of even 83 % of the surveyed students is normal.

During the research the students were asked how they assessed their health. More than half of the students (53%) assessed their health as good, others considered it as excellent (31%) while the rest of the students assessed their health as average. The students were also asked what food they usually choose: delicious, cheap, healthy or low-calorie. 55.4 % of future chefs, 61.5 % of car mechanics, 72.7% of logisticians-freight forwarders and 53 % of furniture makers eat delicious food. According to the price, cheap food is chosen only by 9.9 percent of all the respondents, or 10.8 % of chefs, 12.8 % of car mechanics, 4.6 % of logisticians-freight forwarders and 6 % of furniture makers. 29.6 % of all the respondents usually choose healthy food. Such food is commonly consumed by 31.1 % of students of the chefs

group, 25.6 % of car mechanics, 22.7 % of logisticians-freight forwarders and 41 % of furniture makers. Low-calorie food is chosen most rarely. Only 1.3 % of all the respondents consume it, i.e. 2.7% of the girls studying a chef's specialty. According to the research data, it is possible to state that the majority of students have a habit of preferring delicious food, regardless of its caloric value or impact on health.

It was important to find out how students perceive healthy nutrition. The most common answer was that it is nutrition enrichment with fresh vegetables and fruit. The students of a chef's specialty have more knowledge about healthy nutrition, and many students mentioned the necessary intake of certain nutrient: proteins, fats, carbohydrates and vitamins. The students also noted the energy value of food to be used necessarily in order to feel good. Moreover, they indicated that food should be fresh, it should not contain unnecessary food additives, and it should not be fat. The students from car mechanics and logisticians-freight forwarders groups less frequently provided a list of the necessary nutrients to be consumed but mentioned consumption of vegetables, fruit and cereal products more often. Moreover, very often the students noted the fact that food has to be balanced. Future chefs and car mechanics stated that not only nutrition but an active way of life is very important as well. Healthy nutrition involves not just eating certain food products but physical activity, too. Although the students' knowledge about healthy nutrition is not wrong, however, it is not sufficient: no student provided basic principles of healthy nutrition. N. Umbrasienė, R. Varvuolienė, A. Krupskienė *et al.* (Umbrasienė, Varvuolienė…, 2011) state that more than half (50.4 %) of the respondents would like to know more about food products that are favourable or unfavourable to health.

73.3 % of the respondents note that knowledge about healthy nutrition gained at school is sufficient for them; however, 26.7 % of them suppose that they could get more knowledge on that issue. The students of a chef specialty get most knowledge about healthy nutrition. Even 92.3 % of these students said that school gives sufficient knowledge about healthy nutrition. In addition, a major part of students from other groups also agreed that the knowledge was sufficient: 80 % of logisticians-freight forwarders, 66.7 % of car mechanics and 62.5 % of furniture makers.

The interviewed teachers answered unambiguously that students receive sufficient knowledge about healthy nutrition; however, not all of them make use of it. There are several possible reasons for that. Some students may not properly perceive benefits of healthy nutrition to the human body. The teachers also mentioned that there are students who are not interested in healthy nutrition, and it is difficult to motivate them. Some students think that healthy food is tasteless; therefore, they consider this food is not proper for them and even ignore information about this kind of food.

The students were also asked whether they use knowledge about healthy nutrition in practice. Even 52.7 % of the surveyed students said that only sometimes they apply this knowledge in practice. 21.4% percent of them use it often, but just 9.2 % of the respondents always use it in practice. Just 13.8 % of future chefs, 12.5 % of furniture makers and 5 % of logisticians-freight forwarders always apply this knowledge in practice. The knowledge is often used by 24.6 % of future chefs, 20 % of car mechanics, 15 % of logisticians-freight forwarders and 18.8 % of furniture makers. The gained knowledge is sometimes used by even 75 % of future logisticians-freight forwarders, 53.3 % of car mechanics, 47.% of chefs and 43.3 % of furniture makers. Also, there are students who never apply knowledge about healthy nutrition: 7.7 % of future chefs, 13.3 % of car mechanics, 5 % of logisticians-freight forwarders and 6.3 % of furniture makers.

The teachers' interviews confirm that students not always make use of the gained knowledge about healthy nutrition. The teachers note that some students do not understand the reason why they should eat healthy food. It is possible that they do not have opportunities to apply the knowledge properly due to lack of knowledge or wish to do that and sometimes due to economic reasons. All the teachers emphasized that future chefs have a habit to use the knowledge in practice whereas car mechanics do that least frequently.

During the research it was important to find out whether the students participating in the research eat regularly (Figure 1).
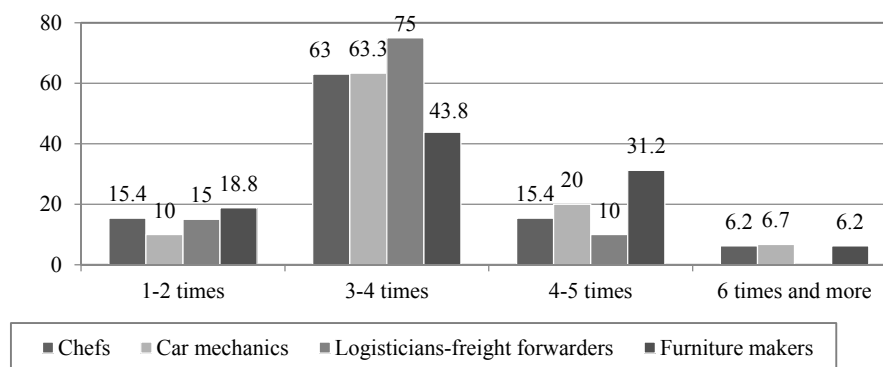
Figure 1. The surveyed students' frequency of having meals a day.

Even 62.6 % of the respondents said they had meals 3-4 times a day: more than half of future logisticians-freight forwarders, chefs and car mechanics use this eating frequency, and furniture makers eat least frequently compared to the other groups. It was asked whether the students have a habit to have breakfast (Figure 2).
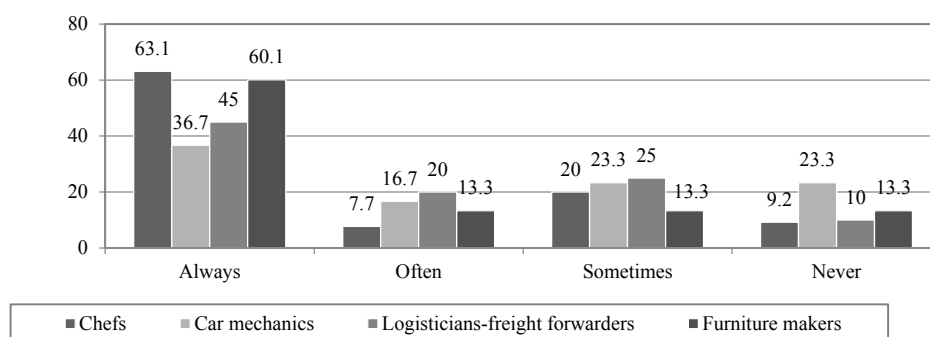
Figure 2. The surveyed students' habits to have breakfast.

53.8 % of the students always have breakfast, and 20.8 % of them have breakfast only sometimes whereas12.3 % of all the respondents never have breakfast. 78.3 % of the students have breakfast at home and 13.2 % of them eat at the school canteen. 63.1 % of future chefs, 36.7 % of car mechanics, 45 % of logisticians-freight forwarders and 60 % of furniture makers always have breakfast.

The interviewed teachers note that breakfast is one of the main daily meals. It is very important for a person, especially for a growing organism. A large number of students do not have a habit of having breakfast every day because they cannot force themselves to get up earlier in the morning in order to have time for breakfast. In the morning, many students prefer sleeping longer and do not complement their body with the necessary nutrients. Eventually, a negative habit not to have breakfast at all is formed. Most future chefs have a proper habit of having breakfast whereas it is observed that car mechanics have this habit least often.

Figure. 3. Following eating regime by the surveyed students.

In order to find out whether the respondents follow eating regime, the following question was asked: "Do you follow the eating regime?" (Figure 3).

It was established that 16 to18 year-old students of The School of Technology and Business do not have a habit of eating regularly: only 8.2 % of the students always eat at the same time, and 45.5 % of them do that only sometimes. Just 10.8 % of future chefs, 3.3 % of car mechanics and 10.5 % of logisticians-freight forwarders always follow the regime.

The interviewed teachers emphasized that they recommend the students to follow the regime; however, most students do not have this habit. On the other hand, students do not always have a possibility to eat regularly due to different time of lessons or irregular extracurricular activities.

The research aimed at finding out how long the students have lunch. It is interesting to note that students do not spend much time for lunch: 46.6 % of all the respondents need 20-30 minutes for lunch, and 40.5 % of them need 10-15 minutes only. Lunch of just 13 % of students lasts for 30-40 minutes: these students eat meals slowly and enjoy food. Future chefs allocate most time for meals. The teachers suppose that this is because these students know best of all the respondents that nutrients are absorbed better when a person eats slower and chews food thoroughly.

The research revealed that students use water quite rarely - only 32 % of all the respondents drink it usually. Quite often the students replace water, which is necessary for their body, by tea (26.8%) and fruit/vegetable juice (20.6%). The respondents stated that they have other drinks (lemonade, compote, fruit-juice gelatine or other) less frequently.

The survey data revealed one more problem: the surveyed students do not always consume different food products for main meals. Just 16.3 % of the students consume different food products for main meals. 37.2 % of the students do that often, and 32.6 % of them do that sometimes. It demonstrates that the majority of the respondents do not follow the principle of food diversity and do not have a habit to consume different food products for main meals. The answer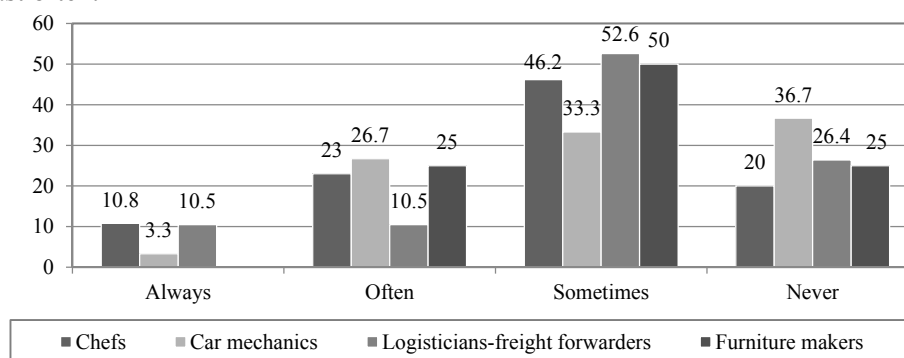s of the respondents show that the surveyed students have a habit of having snacks between main meals. The results of the survey show that 12.3 % of future chefs, 6.9 % of car mechanics, 10 % of logisticians-freight forwarders and 6.3% of furniture makers always have snacks. The survey demonstrates that quite often snacks are not fresh fruit or vegetables (39 %) but pastries, rolls (27.4 %), chocolates (15.1 %) or potato chips (3.4 %). Only about 10 % of students choose yogurt.

The interviewed teachers note that students do not eat proper snacks, they usually prefer those products whose consumption should be moderate.

The students were given a list of five meals and they had to indicate the most often cooked ones. Those students who cook at home usually prepare meat dishes (41 %), they also cook soups (26.6 %) and makes vegetable dishes (21.4 %), and less frequently they make fish dishes (6.4 %) and other (4 6 %) dishes. Future chefs cook food at home a little more often compared to the other groups of students; however, no significant differences were observed.

N. Umbrasienė, R. Varvuolienė, A. Krupskienė *et. al.* (Umbrasienė, Varvuolienė…, 2011) have established that only 41.5 % of students consume fruit and vegetables daily, about 47 % of them do not have breakfast, do not follow eating regime, eat soup rarely, choose high calorie but low value food products, eat sweets or chocolate and chips as snacks, and drink sweet fizzy drinks. The research performed by the author of this paper basically confirms these findings as well.

56.9 % of future chefs, 66.7 % of car mechanics, 50 % of logisticians-freight for warders and 52.9 % of furniture makers always draw attention to expiration dates on food products. Only a small number of students are always interested in food composition: 30.8 % of future chefs, 13.8 % of car mechanics, 5 % of logisticians-freight forwarders and 12.5 % of furniture makers.

Having analysed previously performed researches by N. Umbrasienė, R. Varvuolienė, A. Krupskienė *et. al.* (Umbrasienė, Varvuolienė…, 2011), it is evident that the situation regarding nutrition of 16 to18 year-old students has not changed a lot: students' nutrition and approach to it have not changed. Therefore, it is necessary to improve catering organization in schools, and students should get more systematic knowledge about healthy nutrition.

Conclusions

Having performed the research, it was established that the knowledge of 16 to18 year-old students about healthy nutrition is insufficient. The majority of the students do not have healthy nutrition habits: a large number of the respondents do not give sufficient attention to healthy nutrition, do not follow eating regime, eat low value products as snacks, drink little water, eat little fresh fruit and vegetables and fish. The students check expiration dates on food products, but many of them are not interested in food composition. Future chefs have most knowledge about healthy nutrition; however, having compared nutrition habits of this group of students with the other ones, no significant differences were observed. The surveyed teachers note that students do not analyse their nutrition habits sufficiently, and many students lack motivation to eat healthily.

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The Approaches to Education for Sustainable Development at Home Economics

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Abstract: In the time when there is a rapid growth of human well-being, different environmental and development problems arise. It means that the development of human well-being must be solved in an integrated way. Education for sustainable development includes restructuring education to sustainability, the encouragement of citizenship and promoting education in all society groups and levels. When carrying out the education for sustainable development the versatility of creative approaches is updated. The study process is oriented to a pupil's experience, promoting the critical thinking. Pupils are involved in finding and solving real problems, which are looked into holistically. The learning process includes the real life situations, examples which prove that sustainable development exists in reality. It can be very well seen in the lessons of home economics. The research has been carried out within education for sustainable development. It develops the main aspects of the Project Looking for Likely Alternatives (LOLA). The aim of the research is to determine students' attitude and preparedness for sustainable development. The used methods: discussions**,** questionnaires, observation, and an experiment. The place of the research: Jelgava, Latvia. The obtained results reveal that the respondents can characterize the essence of the education for sustainable development. They thing about the human actions unprotected and unpolluted environment, but not always observe it. Positive changes in daily routines are recognized in the field of sustainable development.

Keywords: approaches, education, Home Economics, sustainable development, school education.

Introduction

Researcher M. Kļaviņš indicate that human impact on the environment is as ancient as the mankind. Already in the ancient times a human being was able to influence the surrounding environment. A rapid turning-point in a man's ability to affect the environment is associated with the industrial revolution, which at first manifested itself as acquisition of new energy sources and manufacturing of new production techniques. Looking historically, the evidence of the human impact on the environment can be found in the most ancient written monuments of mankind, and it was to a certain extent associated with either awareness of the danger of resource depletion, or environmental degradation (Kļaviņš, 2008).

A human being cannot only benefit from natural phenomenon, but also can improve utilization methods of natural resources. There are valuable conclusions built up over the previous generations which can be used to cultivate nature. A lot of knowledge has contributed to efficient use of natural resources, but its excessive exploitation causes mismanagement (Steigens, 1999).

The conception „sustainable development" – „development which meets the needs of modern people without causing threats to the future generation's satisfaction of needs" was defined in the 1987 UN World Environment and development commission notification „Our common future" (Report of the World..., 1987). In sustainable development vision social and economic development is in balance with nature protection and it forms a harmonious system. A sustainable society needs to be economically viable. The environment needs to be functional to allow for a functioning economy (Ryden, 2010). A sustainable community is bound to:
- biodiversity;
- strong economic development;
- cultural diversity;
- democratic relationship between the state and society;
- equal possibilities for everyone (Römpczyk, 2007).

Sustainable development is characterized by three interrelated dimensions:
- environmental,
- economic,
- social (Ilgtspējīga attīstība..., 2015).

The three cornerstones without which the survival of mankind is not possible are: a healthy environment, a functioning economy and a harmonious society. At the same time, they are the desired external preconditions for the development of an individual. Sustainable development means that any economic, social or environmental issue has to be addressed so that the decision would be favourable or unfavourable for the development of other spheres as little as possible (Āboliņa, 2008). The mission of education is to help to understand this system and to act adequately based on knowledge, but education for sustainable development can provide solution for these tasks.

The content and the implementation of the education for sustainable development are closely connected with the principles of sustainable development. It could be considered as the trend of education which has been formed in the process of searching solutions for environmental problems and sustainable development (Corcon, Wals, 2004).

Education for Sustainable of Development was first described by Chapter 36 of Agenda 21 (Agenda 21, 1992). This chapter identified four major thrusts to begin the work of Education for Sustainable of Development:
- improve basic education,
- reorient existing education to address sustainable development,
- develop public understanding, awareness,
- training, formal, non-formal and informal education.

    The relationship between education and sustainable development is complex.

Basic education is a key to a nation's ability to develop and achieve sustainability targets. Education directly affects sustainability in the following three areas.
- *Implementation.* An educated citizenry is vital to implementing informed and sustainable development.
- *Decision making.* Good community-based decisions - which will affect social, economic, and environmental well-being - also depend on educated citizen.
- *Quality of Life.* Education is also central to improving quality of life. Education raises the economic status of families; it improves life conditions, lowers infant mortality, and improves the educational attainment of the next generation, thereby raising the next generation's chances for economic and social well-being. Improved education holds both individual and national implications (McKeown, 2002).

The education for sustainable development in its broader meaning includes the quality improvement of the basic education, the redirection of education towards sustainability, the promotion of civic consciousness and education in all the society groups and levels (Grabovska, 2006).

Change of paradigm in education, providing for closer link of educational system with economic and public processes, will also change the nature of work of teachers. The traditional approach, which involves separation in teaching of subjects with emphasis on theoretical knowledge, should be replaced with more pragmatic approach where the context of the acquisition of knowledge is important. So teacher should be not only the teacher of his or her study subject, but also a diverse, talented personality who helps, inspires, joins different fields, co-operates, gives advices and organises. Education, especially in elementary school and primary school, should be oriented towards the development of communication skills, individuality and thirst for knowledge of children (Sustainable Development…, 2010).

The sustainable development asks for definite learning. Every subject has its specific methods and strategies. When combining creatively each subject's learning methods and strategies, the vision how to teach creatively, promote critical thinking and support sustainable society is created and developed. Education for sustainable development points out those learning skills, perspectives and values which promote and motivate people to civic consciousness. To change the standards and curriculums of the formal education and to direct them to the sustainability, it is necessary to show in the practical life the understanding and opinions about the sustainable society (Izglītība pārmaiņām…, 2015).

Education for sustainable development must give people practical skills that will enable them to continue learning after they leave school, to have a sustainable livelihood, and to live sustainable lives. These skills will differ with community conditions. The following list demonstrates the types of skills students will need as adults. Note that skills fall into one or more of the three realms of sustainable development - environmental, economic and social:

- the ability to communicate effectively (both orally and in writing);
- the ability to think about systems (both natural and social sciences);
- the ability to think in time - to forecast, to think ahead, and to plan;
- the ability to think critically about value issues;
- the ability to separate number, quantity, quality, and value;
- the capacity to move from awareness to knowledge to action
- the ability to work cooperatively with other people;
- the capacity to use these processes: knowing, inquiring, acting, judging, imagining, connecting, valuing, and choosing;
- the capacity to develop an aesthetic response to the environment (McKeown, 2002).

Approaches to education.

- *Children centred approach*. Students must be responsible for their learning and the learning is determined by students' experience and questions.
- *Process oriented approach*. Paying attention to relationships and systems.
- Society and nature directed approach. It means involving students in the processes of real life and everyday situations.
- *Integrated approach – holistic approach*. It includes subjects and perspectives. (Izglītība pārmaiņām..., 2015).

Analyzing the role of education researcher V.Thoresen indicates that education is a prerequisite for stimulating students' involvement. This emphasizes to a solid foundations in social and natural sciences including aspects of sustainable development, for all students. It demands interdisciplinary and transdisciplinary teaching which focus on modern dilemma on micro as well as macro levels. It requires education dealing with the problems individuals encounter in their daily lives. This is often referred to as "holistic" education (Thoresen, 2007).

Using the holistic approach makes students understand and accept easier the education for sustainable development. The holistic approach always preserves entirety, forming the unity as a special activity (Skujiņa, 2000).

Teachers – constructivists give their students a chance to check new ideas, estimate situations, solve everyday life puzzles, find new answers in different situations. They invite students to construct their own knowledge. Students' participation in different groups and projects should be supported in this context (Gage, Berliner, 1998).

However, the teacher remains the main promoter of the pedagogical process. One of the teachers'-educators' central problem is to choose the right of the large amount of available material and methodology in accordance with students' age and the situation of modern era (Dislere, 2012).

The aim of the research - to determine students' attitude and preparedness for sustainable development - is called based on the previously mentioned theoretical approaches and education view.

Methodology

The scientific research was carried out in Jelgava Elementary School (Latvia) during 2014-2015 within education for sustainable development. 62 students aged 11-12 were invited to participate in this research. The research was done within lessons of Home Economics and technologies and students' free time. Different research methods such as: discussions, questionnaires, observations and an experiment were used in the current investigation. The results have been summarized and the relevant ones are presented graphically using calculations of percentage.

Home Economics is one of the subjects at school, where education for sustainable development is realized. Throughout the centuries, home economics has proved its significance in increasing the quality of human life. Today the understanding of the student about the safety and quality conditions of the human living environment, the ability to creatively involve and solve problems in sustainable development is emphasized in Home Economics (Līce, 2012). Characterizing Home Economics from the social aspect researcher V. Muster it deals with conditions and functions of household activities, as well as organization and management of such activities within the household system. V. Muster emphasizes some of the varied strengths of Home Economics that deserve appropriate scientific and social recognition and further elaboration in order to promote sustainable development:

- focus on a responsible use of resources;
- focus on practical knowledge;
- focus on productive household functions;
- focus on an alternative economics paradigm (Muster, 2013).

The research develops the main aspects of the Project Looking for Likely Alternatives (LOLA) (Jegou, Thoresen..., 2009). LOLA Project is a pedagogical tool for teachers and students which assist them in the process of identifying, evaluating and documenting cases of social innovation towards sustainable lifestyles. It was established in 2005 within Consumer Citizenship Network (CCN). The LOLA project allows teachers and their class to discover approach and give visibility to new sustainable lifestyles in their surroundings.

The experiment-project 'Household waste' was carried out following the didactic approaches offered by LOLA Project. The research stages were specified taking into consideration terms of carrying out scientific research:

- choice of the aim and objectives of the research based on local characteristics;
- possible variants of managing the research; methodology;
- questionnaire before experiment;
- experiment (project "Household waste") in process:
- questionnaire after experiment;
- analysis, conclusion.

The steps of project 'Household waste' were worked out according to the main didactic materials of the LOLA Project and the professional pedagogic experience of the authors (Lice, Dislere, 2009).

1. Introduction (explanation, agreement, topicality).
2. Review Methodology of Step-by-Step Cards (every step is briefly analysed, methodology).
3. Step-by-Step in process (activities).
4. Prepare the presentation of project 'Household waste' (show investigation).
5. The presentation of project 'Household waste' (presentations, observations, overview, conclusion).

The following teaching forms were used in the project process: frontal, group and individual. The teaching methods vary depending on the activity structures of the current project. The main ones are: discussions, interviews, brainstorm, role play, table of ideas, the use of information and communication technologies, drawing, photographs, design, presentation, imitation etc. "Household waste" project work is based on students' creative action, critical thinking and experience.

The questionnaire was carried out before and after the project activities. Five of seven questions included in the questionnaire are the same. Its aim is to compare the students' attitude and preparedness for sustainable development before and after the implementation of the project. There are questions where students choose from the given answers: *yes, partially, little, no, or give free answer*. The additional questions were included in the questionnaire after the project.

Results and discussion

Observations and discussions and questionnaire carried out during project helped to analyze approaches to education for sustainable development from the students' point of view.

The discussions within project 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. 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 results of the questionnaire carried out twice and students' activities during the project showed their attitude and preparedness for sustainable development. The answers to the questionnaire showed that students' opinion differs in the beginning and at the end of the project.

- Necessity of sorting the household waste. The question -*1.Must people sort the household waste?*

69% of the respondents indicate that people must sort the household waste and 16% of the respondents answered- partially. Only 10% noted- little and 5% answered- no. After the project activities the evaluation has grown a little: respectively 84%; 12%; 4% and 0%. Students have certainty about necessity of sorting. The detailed percentage of answers is presented below (Figure 1).
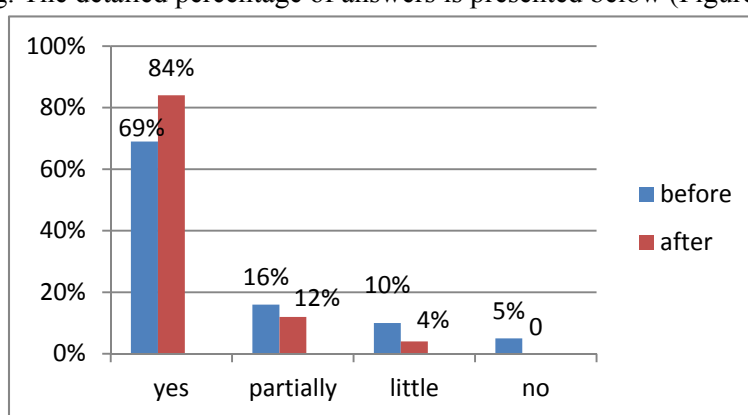
Figure 1. Students' thoughts about necessity of sorting the household waste.

- Sorting the household waste. The question -*2. Do you sort the household waste?*

This question is pointed to students' self-evaluation and their practice in real situation. The data shows that 35% sort the household waste, 31% - partially, 19% - little and 15% - no. After the project the data is different: 69% sort the household waste, 26% - partially, 5% - little and 0% - no. The radical change in the data proves significance of the project in common. Of course, students everyday live is depend from parents and traditions in families. But it is good that they have confidence on practice.

- The essence of sustainable development. The question -*3. Can you characterize the essence of sustainable development?*
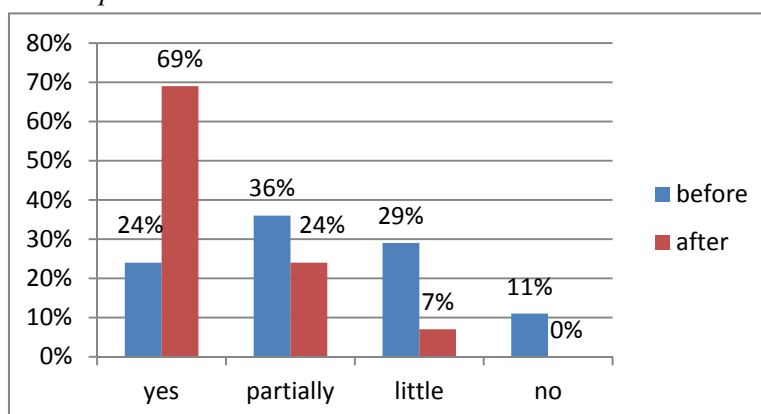
Figure 2. Characteristics of the essence of sustainable development.

Only 24% of the respondents can characterize fully and 36% partially the essence of sustainable development before project, 29% have little knowledge about this issue but 11% cannot characterize it

at all. After the project activities the evaluation is different: 69% gave a full characterization of sustainable development, 24% - partial, 7% - little and 0%- no skills. The detailed percentage of answers is presented below in Figure 2 (Figure 2).

- The human actions in protected and unpolluted environment. The question - *4. Have you ever thought about the human actions unprotected and unpolluted environment?*

Before the participation in the project 10% have not thought about it, 24% have thought a little, 31% have thought partially and 35% have thought about it. After the project 84% have thought about it, 16% partially, but nobody a little. There are no participants who have not thought about it at all. The obtained data showed that respondents have thought more about the human actions in protected and unpolluted environment (Figure 3).
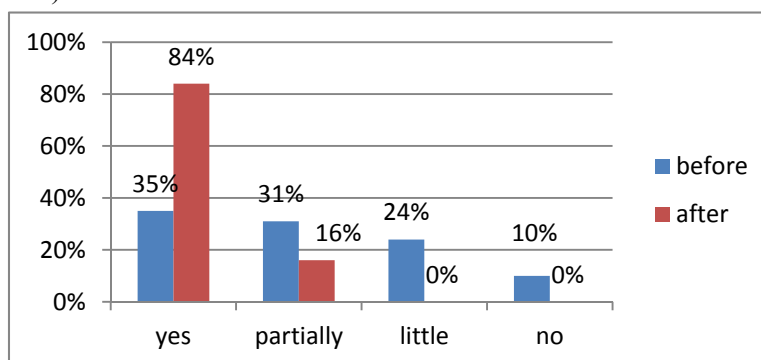
Figure 3. Students' thoughts about the human actions in protected and unpolluted environment.

- The activities which help to protect the environment. The question - *5. Describe 2 or 3 activities which help to protect the environment.*

Students do not named lots of activities how to protect the environment, rather the all the answers were uniform. All respondents named the sort of household waste (it was mentioned in the questionnaire, the students influenced by it). After the project students named more and real activities such as: buy their country products, go more on foot, switch off the light in the day, paper is used economically etc.

The questions are included in the final questionnaire perfected students' opinion about the project. Some of them:

- Taking part in the project. The question - *6. Would you like to take part in such project again?*

The students would like to take part in such activities at school, it indicate 69% of respondents. 19% - sometimes, 7% - a little, but 5% - don't like. They add that prefer to do some practical textile work at this time.

- The activities of the project. The question - *7. Which activities of the project you liked the best?*

The students point different activities such as: to take photo from your surroundings, opposite view discussions, work with information and communication technologies, to look friend presentations, etc.

Conclusions

Scientific achievements promote rapid progression of well-being, but problems are observed parallel with the positive traits. As a result of scientific technological progress, human activity nowadays has become an active factor in forming the environment. Human action can threaten the very survival of a human himself. The created situation requires an active interference in the recovery of the environment.

Sustainable development is characterized by three interrelated dimensions: environmental, economic and social. Sustainable development means that any economic, social or environmental issue has to be addressed so that the decision would be favourable or unfavourable for the development of other spheres as little as possible

The content and the implementation of the education for sustainable development is closely connected with the principles of sustainable development. The sustainable development asks for definite learning.

Education for sustainable development points out those learning skills, perspectives and values which promote and motivate people to civic consciousness.

Project „Household waste" activities are based on students' creative action. The steps of project 'Household waste' were worked out according to the main didactic materials of the Project Looking for Likely Alternatives (LOLA).

The research data show that after taking part in project "Household waste" the students can better characterize the essence of sustainable development (before 24% of the respondents can characterize fully, after 69%), they more thing about the human actions unprotected and unpolluted environment (before 35%, after 84% of the respondents). Students do not name lots of activities how to protect the environment before the project. After the project students named more and real activities such as: buy their country products, go more on foot, switch off the light in the day, paper is used economically etc. The students would like to take part in such activities at school. The best they like opposite view discussions and take photo from your surroundings. 69% of the respondents indicate that people must sort the household waste. But only 35% of respondent do it really. It shows that they have theoretical perception about household waste, but not every day practice.

That kind of project is one of the creative approaches to develop education for sustainable development.

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Dimension of Consumer Culture in Verbal Creativity expression of Pre-service Technology Teachers in the Baltic Countries: the Field of Electronics

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Abstract: The article investigates the expression of verbal creativity of the Baltic pre-service Technology teachers in their final years of study and analyzes the constituent dimension of consumer culture. The students' verbal creativity was examined by means of a verbal expression questionnaire which had been compiled following the methodological recommendations of E. P. Torrance for diagnosing a person's creativity. The development of consumer culture is part of Technological education curriculum analyzing the issues of responsible consumption which are becoming more and more complex. In most cases the result of education is directly dependent on the educator's knowledge, skills, values, habits, experience and sophistication. Creativity breeds creativity, hence, the expression of verbal creativity of pre-service Technology teachers is analyzed as a means to reveal the relation of pre-service teachers with the field of electronics in terms of consumption. The choice of pre-service Technology teachers was determined by the specificity of the subject. The knowledge and patterns gained in classes of home economics are applied practically, hence, the relation between Technology teachers' verbal creativity and consumer culture as well as its expression are becoming increasingly important in the context of preparing learners' for real life. Research shows that the total average grade for academic achievements of the Baltic pre-service Technology teachers in the final years of studies is higher than average (more than 80%) which makes it possible to assume that the informants' subject specific knowledge is higher than the basic level. The analysis of the qualitative research data shows that the informants, irrespective of their average study grade, possess all features of verbal creativity expression – creative fluency, flexibility and originality. Yet, the study did not reveal any tendentious correlation between the informants' verbal creativity expression scores and their study results. However, it was determined that every group included informants who clearly distinguished themselves by the highest and lowest verbal creativity scores. The research data analysis makes it possible to argue that people's individual life experience is significant for the expression of verbal creativity. The aforementioned achievements of the informants create favorable conditions for a successful organization of the education process since the educational interaction among the participants of the education process is initiated and maintained in the verbal form.

Keywords: verbal creativity, consumer culture, pre-service Technology teachers, home economics, electronics, higher education.

Introduction

The main goal of general education skills – to educate a person and prepare him/her for life according to ability – enables education politicians to review educational programmes and critically assess their content on a regular basis; educators – to aim at self-improvement and creatively change teaching methodology by individualizing and differentiating tasks; parents – to responsibly grow their children and continuously learn themselves; learners – to aim at self-recognition and attentively follow the changing motivation for any activity; researchers – to train creative teachers meeting the requirements of the market, community and historical period (Schihalejev, 2013; Bradley, 2011; Urhahne, 2011; LR švietimo įstatymas, 2011; Dačiulytė, Juškeliene, 2010; Lind, Pappel, 2010; Hong, Horng, 2008; Scott, 2007; Europe 2020…, 2010; National Sustainable…, 2004).

Despite the changing political, economic, social environment, people's age, their social status and welfare, every person still steadily remains a consumer: from art to satisfaction of physical needs. The mentioned processes of change and human personality have an unquestionable influence on the consumer culture: on the consumption process, the creation of consumer culture, its development,

transmission and growth. The development of consumer culture (consumer education) is one of the priority spheres of the European Union consumer policy corresponding to the ideas of sustainable growth. Members of the knowledge, information, creative, consumer societies have to be able to act responsibly in social terms by following the principles of sustainable development, choosing daily and luxury goods and services, selecting information, conceiving advertising and its influence, considering ethical, economic, natural, ethnic and identity aspects (Dačiulytė, Juškeliene, 2010; Consumer Education, 2009; Promoting Consumer…, 2009; Europe 2020…, 2010; Lightfoot, Burchell, 2005; Jungtinių tautų…, 2005; Lafferty, 2004; National Sustainable…, 2004).

All of that determined the fact of integrating consumer culture development into the curricula of general education schools. The education system consists of programmes of formal and informal education at school. Nevertheless, researchers argue that the education process also includes "a secret educational programme" which teaches most of real-life skills, including consumer culture. This programme is implemented in the social life of schools: while determining and analyzing different needs, formulating goals of activity, making plans, joining experimental projects, forming work groups and participating in their activity, discovering oneself as a personality, by acting responsibly and creatively in other educational activities typical of school learners. The main creator, planner and organizer of the educational process is the teacher. Teachers create the conditions and situations for educating learners at school by implementing formal and informal education as well as leisure activities and "secret programmes" in a form that would be appealing to their students (Miller, Imrie, 2014; LR švietimo įstatymas, 2011; Haifeng, 2010; Arias, Scafildi, 2009; Scott, 2007).

Due to the influence of political events, the education reforms initiated in the Baltic countries almost three decades ago determined the changes of the subject of home economics in terms of its title, goals, curriculum and organization. The recognition of a subject begins with its title – Technologies. This word, associating with the greatest ever 21st century technological progress, was added to the existing titles by Latvians and Estonians (in Latvia – *mājturība*, in Estonia - *kodundus*), where as Lithuanians rejected the previous titles (in Lithuania the subject was called *buities kultūra*) and chose only the word *Technologies*. The title of Technologies involves the significance of technologies in the modern world and follows the development tendencies of research and society. The multi-disciplinary understanding of the subject Technologies comprises both the material and human intellectual resources, scientific and empirical knowledge, practical activity, ways of work and its organization, and, thus, Technologies can be defined as innovative activity which creates and applies new knowledge and achievements of science as well as processes and products based on this knowledge and achievements that are to satisfy the needs of individuals and the society and essentially change the qualitative possibilities of the society and every individual's life (Ramanauskaitė, Stankevičienė, 2005). In other words, development of consumer culture is becoming an integral part of Technological education.

Technological education is implemented by applying the method of projects which enables learners to get immediately involved in activity following the principles of responsible consumption. During project activity programmes of formal and "secret" education merge facilitating the organic attainment of the objectives of consumer culture development. A professional teacher of Technologies is aware of the methods motivating students for activity, understands the dynamics of different groups of pupils and is capable of supervising the whole process of education, simultaneously fostering the creativity of his/her learners. It has to be noted that lessons of home economics pay special attention to the expression of creativity and its development in relation to production activity which finishes with a visible result or any other result identifiable by other senses. The development of learners' creativity requires a creative teacher of Technologies – a personality looked up to by others (Statauskienė, 2003; Statauskienė 2005; Lind, Pappel, 2010; Žygaitienė, Česnavičienė, 2014). Home economics is the part of general education school curriculum which closely relates creativity with consumer culture. This, in turn, makes one focus on the teacher of Technologies aiming to reveal the interrelation of the aforementioned elements in the verbal expression of the educator. Any change begins with the teacher, his/her personality, knowledge, experience and skills.

The research problem: What dimension of consumer culture (in the field of electronics) can be determined in the expression of verbal creativity of pre-service teachers of Technologies in their final years of study in the Baltic countries?

The research object: the expression of consumer culture in the expression of verbal creativity of pre-service teachers of Technologies in their final years of study in the Baltic countries.

The aim of the research is to determine the dimension of consumer culture in the expression of verbal creativity (the field of electronics) of pre-service teachers of Technologies in their final years of study in the Baltic countries.

The research questions:
- What are the prerequisites for including the development of consumer culture in the curriculum of home economics?
- What is the expression of the informants' verbal creativity?
- What dimension of consumer culture is revealed in the expression of the informants' verbal creativity?

The research methods: scientific literature and document review; qualitative analysis.

Methodology

Methodology of diagnostic analysis of verbal creativity expression. The questionnaire consisted of two parts: the verbal and non-verbal one. This paper presents the analysis of creativity expression on the basis of only part of the questionnaire – the **verbal** one (Figure 1). The creativity questionnaires were prepared on the basis of Torrance's (1995; 1987; 1974) recommendations, K. H. Kim's (2006) work and the Lithuanian General Education Programmes (Pradinio ir pagrindinio…, 2008) for grades 5 to 10. When completing the tasks in the **verbal part** of the questionnaire for identification of creativity expression, the informants were supposed to **provide their answers in the textual form**. The verbal part of the questionnaire consisted of four different tasks completing which the informants had to reveal the variety of objects / phenomena; describe objects / phenomena; foresee the possible use of the objects and the possible consequences of their application. Every task included four different possible topics: textile, nutrition, constructive materials and electronics. The thematic tasks of the verbal part were prepared keeping in mind the general programme of home economics (Pradinio ir pagrindinio…, 2008; Mācību priekšmetu…, 2015; Mājturība un tehnoloģijas..., 2006a; Mājturība un tehnoloģijas..., 2006b). On the basis of their disposition and wishes the informants were allowed to choose the topic from which they would like to complete tasks. In the process of completing all the four tasks the choice of the topic for the task was open.

Kinds of Verbal Tasks			
Description of objects / phenomena of Technological Education	Possibilities of using the objects / phenomena of Technological Education	Variety of objects / phenomena of Technological Education	Consequences of using the objects / phenomena of Technological Education
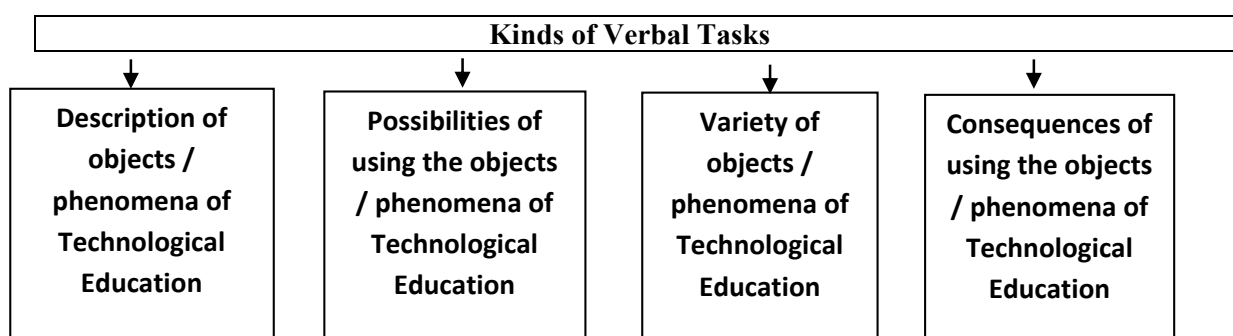
Figure 1. Kinds of Verbal Tasks in the Study on the Expression of Verbal Creativity.

Every task has to be completed in 3 minutes. The completion of the questionnaire on the identification of personal expression of verbal creativity in the textual form took 12 minutes (4 tasks x 3 minutes), not including the instruction and demographic questions.

The first feature of the expression of verbal creativity – **fluency** – is diagnosed by adding up the total sum of the informant's answers. The expression of creativity on the basis of fluency is measured by amplitude, quantity. The more the answers the higher level of creativity is achieved on the basis of the fluency criterion. In the calculation of the expression of creativity on the basis of points for the fluency criterion, every answer is assessed with 1 point.

Another feature of the expression of verbal creativity – **flexibility** – is perceived as the number of categories (classes). The expression of creativity on the basis of flexibility is measured by the variety of categories (classes) and their amplitude. All the answers of the respondents are grouped into categories (classes) according to their meaning. Irrespective of the number of answers in one category (class), when adding up the results, a category (class) is counted only once. The more variants of categories (classes) there are in the answers the higher level of verbal creativity expression on the basis of the flexibility criterion. Every category (class) is assessed with 3 points.

One of the features of verbal creativity, i.e. **originality**, is determined according to the number of unexpected, non-standard, unusual answers. An answer is considered to be original when it is unique, exclusive in the group of the informants. Every original answer is assessed with 5 points. Different groups provide different original variants of the answer.

Methodology of identification analysis of the dimension of consumer culture. The questionnaire on the expression of personal verbal creativity is completed in the textual form which makes it possible to analyze the content of their textual answers. The possibility to freely choose the topic of the task created favorable conditions to determine the informants' disposition to one or another sphere of home economics: textile, nutrition, constructive materials, and electronics. This paper focuses only the textual answers to the tasks on the topic of electronics. The informants' textual answers to every task were classified into categories and subcategories on the basis of their meaning. Dimension is conceived as a unit of measurement; thus the textual answers of the respondents were searched for the expression of consumer culture.

The characteristics of the informants. The sample of a qualitative research is purposive and typically convenient (Patton, 2015). The participants of the research were only the pre-service teachers of Technologies (home economics) in their final years of study from Estonia, Latvia and Lithuania. The nineteen informants who participated in the research were of different ages: from 21 to 41 (Table 1). The students in Estonia were older than those in Latvia and Lithuania. The students from Latvia had the highest average grades for their study achievements (8.99).

Table 1

Educational and Demographic Characteristics of the Qualitative Research Participants

No	Lithuania			Latvia			Estonia		
	Nationality	Average grade of the last term	Age	Nationality	Average grade of the last term	Age	Nationality	Average grade of the last term	Age
1	Russian	9,07	22	Latvian	8,9	22	Estonian	7,6	32
2	Polish	8,0	21	Latvian	8,4	22	Estonian	7,6	29
3	Lithuanian	7,0	22	Latvian	9,4	22	Estonian	8,4	22
4	Lithuanian	8,0	22	Latvian	9,3	21	Estonian	9,0	27
5	Polish	9,2	22	Latvian	9,0	21	Estonian	8,0	41
6				Latvian	9,0	22	Estonian	8,02	29
7				Russian	8,9	22	Estonian	9,0	29

The studies of Technology Education in the Baltic universities were chosen by people of Estonian, Latvian, Lithuanian, Russian and Polish nationalities (Table 1).

Results and discussion

The verbal creative expression of Lithuanian pre-service Technology teachers in their final years of study. The informant possessing the highest average grade (9.2) in the group of Lithuanian informants (informant No. 5) distinguished himself in the group only by exceptional verbal creative flexibility (75). Whereas the informant possessing the lowest average grade (7.0) for his studies (informant No. 3) distinguished himself in the group by the highest scores for verbal creative flexibility (45) and verbal creative originality (175) (Table 2).

Table 2

The Scores for Verbal Creative Expression of Lithuanian Pre-service Technology Teachers in their Final Years of Study

Informant	FLUENCY	FLEXIBILITY	ORIGINALITY	VERBAL CREATIVITY	Average grade
1	*31*	*48*	*110*	*189*	9.1
2	42	57	170	269	8.0
3	**45**	63	**175**	**283**	*7.0*
4	40	63	140	243	8.0
5	44	**75**	160	279	**9.2**
Average	40.4	61.2	151	252.6	8.25

The informant possessing one of the highest average grades (informant No. 1) distinguished himself in the group by the lowest scores for the expression of verbal creativity (verbal creative fluency – 31, verbal creative flexibility – 48, verbal creative originality - 110). Referring to the data of the qualitative analysis it is possible to argue that high results for achievements do not determine high scores for verbal creativity expression. Nonetheless, there was no tendentious correlation between the expression of verbal creativity and average study grades in the group of Lithuanian informants. However, it was observed that the informants in this group distinguished themselves by the highest (informant No. 3) and lowest (informant No. 1) scores for verbal creativity.

The analysis of the qualitative research data shows that the Lithuanian informants, irrespective of their average study grades, possess all the characteristics of the target verbal creativity expression – creativity fluency, flexibility and originality (Table 2).

The verbal creative expression of Latvian pre-service Technology teachers in their final year of study. The informant who distinguished himself by his academic achievements (average grade 9.4) in the group of Latvian informants (informant No. 2) did not reveal exceptional scores for verbal creativity. The informant possessing the lowest average study grade (8.4) (informant No 1) distinguished himself by the lowest scores for verbal creative originality (70) and general verbal creativity (163) in the group (Table 3).

Table 3

The Scores for Verbal Creative Expression of Latvian Pre-service Technology Teachers in their Final Year of Study

Informant	FLUENCY	FLEXIBILITY	ORIGINALITY	VERBAL CREATIVITY	Average grade
1	39	54	*70*	*163*	*8.4*
2	38	63	110	211	**9.4**
3	40	57	120	217	9.3
4	30	*48*	140	218	9.0
5	*26*	51	90	167	9.0
6	**74**	**84**	**355**	**513**	8.9
7	41	57	125	223	8.9
Average	41.14	59.14	144.29	244.57	8.99

The analysis of the qualitative research data revealed that there was determined no significant correlation between the academic achievements of the Latvian informants and their scores for verbal creativity expression. However, it can be argued that the Latvian pre-service Technology teachers in the final year of studies do possess all the target features of verbal and non-verbal creativity. It was also observed that this group includes the informant possessing clearly the highest scores for verbal creativity (Table 3).

The verbal creative expression of Estonian pre-service Technology teachers in their final year of study. The informants possessing the highest (9.0) (informants No. 4 and No. 7) and lowest (7.6) (informants No. 1 and No. 2) average grades for their academic achievements revealed diverse scores for their verbal creativity expression (Table 4).

Table 4

The Scores for Verbal Creative Expression of Estonian Pre-service Technology Teachers in their Final Year of Study

Informant	FLUENCY	FLEXIBILITY	ORIGINALITY	VERBAL CREATIVITY	Average grade
1	50	66	200	316	*7.6*
2	41	66	170	277	*7.6*
3	39	*57*	*145*	*241*	8.4
4	*35*	60	155	250	**9.0**
5	**62**	72	**305**	**439**	8.0
6	40	66	165	271	8.02
7	45	**87**	170	302	**9.0**
Average	44.57	67.71	187.14	299.42	8.23

On the basis of the research data it can be argued that in the Estonian group of the informants there was determined no significant correlation between the informants' academic achievements and their verbal creativity expression scores. Nevertheless, it is important to note the exceptional creativity and age of informant No. 5 in this group. The oldest informant (41 years old) (Table 1) possesses the highest verbal creative fluency in the group (62), verbal originality (305) and general verbal creativity (439) (Table 4). This group also includes an informant (informant No. 3) who clearly distinguished himself by the lowest score for verbal creativity expression.

The qualitative research data make it possible to argue that a person's individual life experience is significant for the expression of verbal creativity, yet very frequently such life experience cannot be assessed by any scores or other units of measurement. In other words, everyday life develops creativity, and creativity creates life.

The common average study grade of the pre-service Technology teachers of the Baltic countries is higher than 80 % (8 points): it was 8.25 in the Lithuanian group of informants, 8.99 – in the Latvian group, and 8.23 – in the Estonian group (Tables 1, 2, 3, 4). Higher than average grades for academic achievements show not only the knowledge acquired during pedagogical studies, but also better than average skills and accumulated personal experience which can be creatively applied in the informants' practical pedagogical activity in order to flexibly solve the issues of organizing the teaching/learning process (Scott, 2007; Hong, Horng, 2008; Bradley, 2011; Urhahne, 2011).

The dimension of consumer culture in the expression of the informants' verbal creativity.

The field of electronics is one of the constituent parts of the curriculum of home economics (Pradinio ir pagrindinio…, 2008). The relevance of this field in the context of consumer culture is unquestionable. The analysis of the qualitative research data revealed that the topic of electronics was chosen in a little bit less than a quarter of all the choices (18 out of 76 choices). Having in mind the fact that in case of free choice of the topic the informant is likely to choose a more appealing, better-known topic, it can be assumed that the field of electronics is familiar and understandable to the pre-service Technology teachers of the Baltic countries.

The first task on the personal verbal creativity expression was related to using objects, their application. One fifth of the informants (4 out of 19) chose the topic of electronics and provided their answers about the possible use of a *wire*. The analysis of the qualitative research data showed that there were five categories distinguished: practical application in the home environment; artistic expression; personal growth; game; sport; destruction (Table 5). The category of practical application at home was divided into two subcategories: using the wire according to its initial purpose and extended possibilities of application. The informants primarily conceived the wire as the electricity "conductor", as a means for "connecting electronic devices". Moreover, the informants also distinguished the aesthetic purpose of electricity – "to illuminate bushes in the garden". In the subcategory of extended possibilities of use the following functions of the wire were identified: connection ("a wire can be used to secure other things", "to tie up pressed hay", "to tie a sack", "to tie firewood"), territorial designation ("to fence a yard"), measurement ("it can be used as a measurement tape"), fastening ("a wire can be used to make a handle

when carrying a heavy bag"), a tool or constructive material ("use it instead of a washing line", "for hanging the curtains").

Table 5

The Possible Applications of a Wire in the Baltic Pre-service Technology Teachers' Answers to the Tasks of the Diagnostic Questionnaire on Verbal Creativity Expression

Category	Subcategory	Statements, *e.g*.
Practical application at home	Using the wire according to its primary function	*conductor; to illuminate bushes in the garden; to connect electronic devices;*
	Extended possibilities if use	*To use instead of a washing line or to hang the curtains; to tie the pressed hay; to fence a yard;*
Artistic expression	Part of clothing, accessories	*To create different accessories; to use instead of a belt; to tie up shoes;*
	Interior decoration, handicraft	*To make a flower; in decorations as supplementary material;*
Games, sport	Games, sport inventory	*To use as a skipping rope; as a start or finish line in sports competitions; as sports inventory;*
Personal growth	Exact sciences	*To solve a math task; to use as a measuring instrument by later matching the wire to a specific unit;*
	Reflection	*The wire can be used to indicate the reference point for embedding the recently finished work;*
	Profession, duties	*Instructor;*
Destruction	Punishment	*To use it for physical punishment;*

The category of artistic expression was divided into two subcategories: part of clothing, accessories; interior decoration, handicraft. The pre-service Technology teachers of the Baltic countries view the wire as a potential to add exclusive details to their clothing: "*to tie up shoes"*, to use it "*instead of a belt*", to create "*different accessories*". The physical characteristics of a wire make it possible to use it "*as a supplementary material in decorations*" or *"for folding a flower"*.

In the category of games and sport there was only one subcategory distinguished. The informants apply the wire in sport as "*inventory*": "*skipping rope"*, for marking "*the start or the finish line*". The category of personal growth was divided into the following subcategories: exact sciences; reflection; profession, duties. The pre-service Technology teachers can use the wire for "*solving math tasks*" and experimenting when the wire is used as "*a unit of measurement by later matching it to a specific unit*" (Table 5).

The organization of Technological education at schools requires a resourceful teacher who is able to search, experiment, discover, present, introduce, interest, engage and help his pupils to learn. An inseparable part of the learning process is reflection which requires time and in-depth understanding. The qualitative analysis helped to discover one ingenious way for using a wire in the process of reflection: "*it can be used as a reference point for embedding the recently completed work"*. Moreover, the informants related the wire to a specialist who instructs about the future tasks and explains the rules for their completion. It can be assumed that the pre-service teachers of Technologies relate the wire both to opportunities and a certain danger – electricity running through it. The informants' answers revealed their perception of the significance of security. The last category – destruction – has only one subcategory – punishment. The informants' answers revealed one more danger caused by the wire – physical punishment. A wire can be used "*as a means of punishment"*. Such data show that the new generation is familiar with the concept of punishment which is based not only on the humanistic paradigm (Table 5).

The content analysis of the answers to the task on the application of the object demonstrated how versatile the informants' perception of a wire is. The Baltic pre-service teachers of Technologies identify a wire not only as a conductor of electricity or signals, but also as a thing which reminds of how significant security rules are, as a tool for joining several elements, designating a territory, measuring or fastening other objects, as a constructive material, an item of sports or game inventory, a constituent part of clothing and interior details, and as a learning tool which helps to understand exact sciences

better and prompts self-reflection. The aforementioned facts make it possible to assume that the Baltic pre-service Technology teachers not only have some understanding of electronics, but also reveal their positive attitude to reusing objects by expanding their possible applications.

The second task on the expression of verbal creativity was related to the possible consequences of a provided situation. Half of the informants (10 out of 19) chose the topic of electronics and presented their considerations about the following situation: what would happen if the price of electricity grew by ten times. The analysis of the qualitative research data allowed distinguishing three categories: fluctuation, alternatives and the changing lifestyle (Table 6).

Table 6

The Baltic Pre-service Technology Teachers' Opinions about the Consequences of Tenfold Price of Electricity in the Answers to the Diagnostic Questionnaire Tasks on Verbal Creativity Expression

Category	Subcategory	Statements, e.g.
Fluctuation	Absence of change	*Nothing would change;*
	Change of time periods	*Some people would start living like primitive men did; everything would stop in the world, we would return to the beginning;*
Alternatives	Use of alternative energy	*Would use other, alternative energy;*
	Human and research initiative	*People would invent something new; science would start degenerating; I would employ hamsters <...>;*
Changing lifestyle	Changing home environment	*All houses would get a wood burning stove and would cook food on them; people would make everything with their own hands;*
	Factors determining the changing lifestyle	*Bigger expenses; all the devices would be replaced by manual work (like in the old times); people would start starving; nothing, absolutely nothing would work; it would be dark everywhere;*
	Changing habits of consumption	*Chaos would dominate in the world or some specific country since people are not able to economize electricity; nobody would purchase unnecessary electronic devices;*
	Migration	*A lot of people would migrate to the countries where electricity is cheaper;*
	Frugality	*Parents would economize electricity; people would lead a more frugal life;*

The pre-service Technology teachers of the Baltic countries image two different possible solutions of the situation – two distinct variants; hence, the category of change is divided into two subcategories: absence of change and change of time periods. The first possible variant – *"nothing would change"* – is based on the observation of people's behavior. In the last three decades the Baltic countries have experienced numerous political, economic and social changes, shocks or crises, however, people remained stable and stoic. The other possible variant is related to cardinal, utopian changes: *"some people would start living as the primitive men did", "it is likely that we would return to the old times and would live without electricity", "everything would stop in the world, we would return to the beginning"* (Table 6). Such considerations show the extent of electricity consumption which can be related to the way of life of the modern civilization.

The category of alternatives consists of the following subcategories: using alternative energy; human and research initiative. The informants viewed the increased price of electricity as an incentive to turn to alternative energy following the EU directives. This other alternative is the results of people *"being used to the pleasures of electricity"*. One informant demonstrated his knowledge of physics by applying his knowledge for electricity production: *"I would employ my hamsters that turn a wheel. I would attach a generator to the wheel and in this way I would produce energy. Then I would only have to pay for*

hamsters' food". This example validates the benefit of knowledge for the expression of verbal creativity. The in-depth perception of phenomena enables their loose, playful interpretation.

The category of changing lifestyle consists of the following subcategories: the changing home environment; factors determining the changing lifestyle; changing consumption habits; migration; frugality. In the subcategory of the changing home environment the following changes were observed: home equipment (*"all houses would get a wood burning stove", "there would be no need to wire houses"*), cooking (*"food would be cooked on a wood burning stove", "food would be cooked on a stove", "we would eat cold food"*), artificial light (*"there would be only candle light", "in the evenings people would sit by the candles"*) and activity (*"people would get water in wells, rivers, lakes", "people would make things manually", "children would spend only 30 minutes at the computer"*) (Table 6).

In the subcategory of factors determining the changing lifestyle, the pre-service Technology teachers distinguished a financial factor (*"bigger expenses", "the country would have the necessary finance to be able to use so much electricity", "people would not be able to use electricity in their homes since they would not afford it"*) which would also affect the manufacturing process (*"all the devices would be replaced by manual work (like in the old times)"; "factories and other institutions would stop working"*), sales (*"produce would become more expensive in shops", "they would be able to sell their produce", light (electricity) would become more expensive, hence, production, materials and technology would also be more expensive. Consequently, the prices for the produce made would be much higher"*), every person's life conditions (*"nothing, absolutely nothing would work"; "people would have no hot water", "most people would have no electricity"*), people's welfare (*"it would be harmful both for private and legal entities", "people would start starving"*) and their sophistication (*"the quality of life would significantly drop since not everybody would be able to use the media"*).

In the subcategory of the changing consumption habits it is possible to distinguish a bigger use of alternative goods (*"all kinds of candles would disappear from the shops"*), and the possible results of that would be redistribution of market leaders in the market (*"candle manufacturers would become really rich"*) and a smaller use of electronic devices (*"some people would refuse some electronic devices", "most electronic devices would disappear", "would not purchase unnecessary electronic devices"*). Moreover, the informants foresaw a partial rejection of technological progress by acknowledging the advantages of the older technological decisions: *"smart phones would be replaced by simple older phones whose batteries serve much longer"*. It has to be noted that the smaller consumption of goods is not related to people's worse health or poorer quality of life. However, the same cannot be said about the consumption of electricity. The analysis of the qualitative research data repeatedly revealed the extent of electricity consumption which can be related to people's welfare and harmful consumption habits: *"there would be chaos in the world or some specific country since people cannot economize electricity"*. The influence of habits of comfort on people's everyday life is supported by the following idea: *"in order to charge their phone, people would have to go to the neighboring country"*. People's attachment to the comfort provided by electricity distinguished by the informants can also be observed in the subcategory of migration: *"a lot of people would migrate to places where electricity is cheaper"*. The last subcategory – frugality – covers the foreseen limitation of consumption habits related to people's financial welfare: *"people would live more frugally", "my parents would economize electricity"* (Table 6).

The content analysis of the answers about the possible consequences of the given situations shows the informants' comprehension of the causes and consequences of the consumption process. The growth of electricity price is viewed by the Baltic pre-service Technology teachers as an opportunity to use more alternative energy and thus follow the EU directives. Nevertheless, the more expensive electricity would introduce some changes in people's everyday life, production, sales and formation of new habits. The analysis of the research data shows the informants' optimism in the field of smaller consumption of electronic equipment and power in general, which is directly related to people's welfare and the crucial pre-condition for the modern civilization. Comfort provided by electricity can even become a reason for emigration.

The third task on personal verbal creativity expression is related to the variety of objects. One tenth of the informants (2 out of 19) chose the topic of electronics and provided a list of devices economizing

electricity. The analysis of the qualitative research data revealed two subcategories: home equipment and electronic devices providing comfort (Table 7).

Table 7

The List of Energy-saving Devices Provided by the Baltic Pre-service Technology Teachers in their Answers to the Tasks in the Diagnostic Questionnaire on Verbal Creativity Expression

Category	Subcategory	Statements, e.g.
Home equipment	Kitchen appliances	*chopper; fridge; electric stove;*
	Sources of light	*LED lights; energy-saving bulbs; flashlight;*
Home appliances providing comfort	Personal appliances	*telephone; telephone charger; tablet;*
	Entertainment appliances	*TV set; radio;*

The category of home equipment consists of kitchen appliances and sources of light. According to the informants, *"food chopper", "electric stove"* and *"fridge"* are energy-saving kitchen appliances. This statement makes it possible to argue that pre-service Technology teachers have insufficient knowledge of physics, hence, are not aware of the operation principles of energy-saving devices. In the category of sources of light the informants included *"LED lights"* and *"flashlights*". These examples can be found in almost all textbooks of home economics in the Baltic countries and that in turn facilitates the formation of sustainable consumption.

The category of home appliances providing comfort consists of two subcategories: personal appliances and entertainment appliances. *"Telephone", "mobile telephone charger", "tablet", "computer"* and *"electric shaver"* were attributed to the subcategory of personal appliances (Table 7). The aforementioned new generation devices can be attributed to the group of energy-saving devices.

The content analysis of the informants' answers to the task on energy-saving devices revealed a necessity of knowledge of physics for the development of consumer culture. On the basis of background knowledge of physics is it possible to develop the pupils' critical thinking and in-depth perception of causes and consequences of consumption habits. It can be assumed that the content of textbooks and mass media facilitate the formation of sustainable habits of consumer culture.

The fourth task on personal verbal creativity expression is related to description of objects. Every tenth informants (2 out of 19) chose the topic of electronics and provided a list of words and word combinations which could be used to describe saving electricity. The analysis of the qualitative research data shows that the there are two categories distinguished: causality and frugal behavior (Table 8).

Table 8

The List of Descriptions about Saving Energy in the Answers of the Baltic Pre-service Technology Teachers' Answers to the Diagnostic Questionnaire Tasks on Verbal Creativity Expression

Category	Subcategory	Statements, e.g.
Causality	Sustainable development	*Green thinking; conservation of fossil fuel; human conservation;*
	Psychological aspect	*Necessary;*
	Economic aspect	*Saving money; small salary;*
Frugal behavior	According to strategy	*considered; cautious; pre-supposed;*
	According to content	*hard; complicated; useful; useless; popular;*
	According to activity	*practice; variant of one possibility; stinginess;*
	According to consequences	*darkness; robberies;*

The category of causality consists of the following categories: sustainable development; psychological aspect; economic aspect. The titles of the subcategories reflect the motives proposed by the informants on the basis of which one can save electricity. The idea of sustainable development combines the components of natural resources (*"conservation of fossil fuel"*), people (*"human conservation"*) and

thinking (*"green thinking"*) and forms the habits of consumption. Conservation of energy can be prompted by the present or future economic reasons (*"small salary", "savings"*) as well as by psychological perception (*"necessary"*). The category of frugal behavior comprises the following subcategories: on the basis of strategy; on the basis of content; on the basis of activity; on the basis of consequences. The titles of these subcategories name the stages of the implementation of frugal behavior. First of all, strategies are selected (*"considered", "cautious", "possible"*), then it is concentrated on the content (*"hard", "complicated", "useful", "useless", "popular"*), then some specific course of action is chosen (*"practice", "variant of one possibility", "stinginess"*) and, finally, the consequences of frugality are considered (*"darkness", "robberies"*) (Table 8).

The content analysis of the answers to the task on the description of saving energy shows that the informants are aware of the principles of project work and are able to apple them flexibly. The analysis of significant activity or phenomenon according to the principles of project work can become relevant for studying consumer culture.

Conclusions

The curriculum of general education schools is formed bearing in mind the challenges of the period. Due to this reason, the programmes of Technological education have been reformed in the Baltic countries and their implementation was based on the method of projects. The project method merges theory and practice, research and empirical knowledge, orientates at self-recognition and creating culture, whose inseparable part is consumer culture. In the context of organizing the implementation of Technological education programmes special emphasis is placed on creativity, both from the perspective of a creator and consumer. In lessons of home economics learners perceive themselves as creators and consumers functioning in the topical spheres of textile, nutrition, constructive materials, electronics and design.

The Baltic pre-service Technology teachers in the final years of their studies have a higher than average grade for their academic achievements (more than 80 %) which makes it possible to assume that the informants possess higher than basic knowledge of their study subjects. The analysis of the qualitative research shows that the informants, irrespective of their average grades, possess all the target features of verbal creativity expression – creative fluency, flexibility and originality. Moreover, it was observed that there are no tendentious correlations between the scores of the informants' verbal creativity expression and their average grades for academic achievements. However, it was noted that in all the groups there were informants who clearly distinguished themselves by the highest and lowest scores of verbal creativities. The analysis of the research data makes it possible to argue that people's individual life experience is significant for their verbal creativity expression. The aforementioned achievements of the informants create favorable conditions for the organization of a successful educational process since educational interaction among the participants of the education process is initiated and maintained in a verbal form.

The analysis of the qualitative research data revealed that one fourth of all the selected tasks meant for the identification of people's verbal creativity expression were from the topic of electronics (18 choices out of 76). The content analysis of the tasks on the possible applications of a wire, increased price of electricity, description of economizing and listing energy-saving devices makes it possible to argue that the tasks on verbal creativity expression reveal the dimension of consumption and that the field of electronics is familiar and comprehensible to the pre-service teachers of Technologies of the Baltic countries. Moreover, the informants revealed a positive attitude to reusing things by expanding their possible applications, perception of sustainable development ideas, and responsible consumption on the personal, local and global scales. The content analysis of answers shows the informants' awareness of the principles of project work and their ability to employ this method in a flexible way. The activity or phenomenon analysis carried out according to the principle of project work can be beneficial for quality studies of consumer culture. The analysis of the qualitative research data shows that knowledge, especially knowledge of physics, is essential for developing consumer culture and verbal creativity expression. Only on the basis of knowledge (e.g. of physics) it is possible to develop the learners' critical thinking and in-depth comprehension of the causes and consequences of consumption habits. The in-depth understanding creates preconditions for free and playful interpretation of phenomena which can

have direct influence on people's verbal creativity expression and, consequently, on their creative activity and decisions.

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The Understanding of Life Quality by Students Nowadays

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Abstract: Taking into account the importance of the human resources and potential of young students in the future of the country and the relevance of life quality, the main aim of the article is to clarify the perceptions of Latvian students on the quality of life, its promoting and limiting aspects. In order to get a better insight in students' understanding of life quality in today's situation, questionnaires with incomplete sentences were created. 249 students from four institutions of higher education were surveyed. The main categories that have an impact on students' quality of life are as follows: students themselves and their own personality traits, interpersonal relationships, family and friends, material support, personal development and education, as well as time. According to students, the contributors to a good quality of life are often different from the restrictive aspects. Besides financial problems, students mention an existential problem, namely, lack of time as one of the problematic categories of life quality. Students' quality of life is promoted by the learning environment, if it is open to change, innovation, and is characterized by a positive attitude.

Keywords: students, quality of life, personal understanding, incomplete sentences, higher education.

Introduction

As from the beginning of the 21st century, the topic on life quality has been addressed in the politics of many European Union countries. European Council of the General Convention on the Value of Cultural Heritage has put forward the support of the quality of life as the main goal for the society (Eiropas Padomes..., 2006). The need to improve and harmonize the life quality of a human being and society is accentuated also in the Memorandum on lifetime learning by the European Commission work group. Also in Latvia, the topic on life quality has become more relevant with the rapid economic growth, which was followed by an even more rapid decline. It is referred to as a priority in the Latvian National development plan – "life quality for every one of us" (Latvijas Nacionālais…., 2012, 13). At the start of the market reforms, the social priorities were replaced by pragmatic approach to obtain maximum profits. At the end of the century, government efforts were primarily focused on the formation and development of market economy institutions. As a result, the economy improved, but the quality of life for most people did not, if not worsened. The social gaps enlarged. More students and labour force emigrated abroad. As shown by studies of economists, approximately one half of the Latvian population live below the poverty line (Saksonova, Solovjova, 2015). Hence, one can conclude that the improvement of life quality is not very successful.

In this context, the studies on the life quality of Latvian population has become one of the central motives of both social and political documents. Authors of Latvian economy guidelines, for example, as one of the first and main objectives mention "ensuring stable and rapid economic growth while also contributing to the increase in life quality of Latvian population" (Ancāns, Birznieks, 2007, 47). However, the country's economic growth is closely linked to the scientific and technological progress. This means that the economic development is related to the potential of the population, including their education levels and the increase of those levels. For Latvia, a country with limited natural resources, the largest national treasure is its population, human resources. Hence, it is understandable that the future of the country is dependent on the education of the population. Following a permanent increase in number of students during the national independence years until 2006 when Latvia was ranked second in the world by number of students per 10,000 inhabitants, the decrease in number of students has begun and is still underway. The decrease in number of students is not proportional to the decline in the birth rate, respectively, to the decrease in number of school pupils. Instead it has declined even more. This can be explained with the emigration trend – more secondary school graduates wish to continue their studies abroad in order to receive better quality and better treatment. This is confirmed by, for example, the UK Higher Education Statistics Agency (Gruntmanis, 2012).

Quality of life is undeniably a vast, multidimensional concept that includes all aspects of life and is used in various fields: geography, philosophy, medicine, social sciences, health (Oort, Visser, 2005). There is still no agreement neither on the number of the dimensions of the concept, nor on the diversity. There is no universally accepted definition of the concept "quality of life" – these definitions are extremely heterogeneous in the social literature. There is also no standard form for the measurement of the quality of life. And it is not related to the lack of creative ideas. For example, *R.A.Cummins* has identified more than 100 different definitions of quality of life and approximately 800 different measurements for it (Cummins, Lau, 2006).

In the first half of the 20th century, the quality of life in many countries was measured only by the level of material well-being, e.g., the higher the country's GDP, the higher the quality of human life. It is believed that the concept of quality of life in its modern sense was first expressed by *L. Johnson* who in his 1964 speech emphasized that the achievements of public goals "cannot be measured with our savings in bank accounts. They can be measured only by our people's quality of life" (McCall, 1975, 229).

R. A. Cummins performed an analysis of the 27 widely used definitions on the quality of life and concluded that 85% of these include the emotional well-being, 70% - health, 70% - issues related to one's private life, and 56% - work and everyday activities (Cummins, 1996, 304). The concept of life quality in Latvia covers the physical and mental health, leisure time and its usage, work and link with the society, the ability to make independent decisions and realize these, as well as the material support (COMMIN Baltic…, 2015).

The researchers of quality of life emphasize that the reason for so many different approaches to defining the concept is related to the fact that life quality is associated with both objective indicators (e.g., the human living conditions), as well as subjective indicators (e.g., human life satisfaction) (Borthwick-Duffy, 1992, 52). So, in a broader sense, quality of life includes both objective indicators and subjective satisfaction and evaluation. In Latvia, in previous studies on subjective satisfaction, a significant correlation has been established: the more people feel in control in a situation, the more they are satisfied with the situation. It is interesting that fields which are related to work and income (opportunities to find a job, salary, work environment and conditions, income, family well-being) are the ones where people do not feel in control (Bela, 2006, 42).

Nowadays, a lot of research is performed on how a particular life dimension, e.g., health, physical activities, etc., is linked to the quality of life. In the US and many European countries, special social indicators are used to measure and operationalize the quality of life (Noll, 2004, 153). The main advantage of using social indicators is the objectivity. These indicators can be relatively easily defined and their impact – calculated, without reliance on the individual's subjective opinion on quality of life (Diener, Suh, 1997, 190). Nevertheless, many authors conclude that quality of life cannot be assessed with external measurements only, because the basis for quality of life is an individual's life experience (Wilk, 1999, 91). This means that the objective indicators alone cannot reflect whether a person feels good or not.

When prioritizing the indicators of quality of life, it is important to take into account the prioritization of the individual – which area is more important or less important for the individual. For example, when evaluating the quality of life of a person, one of the indicators might be very low. This, however, might not have a significant impact on the quality of life, if the respective area is not important for that person. And the other way round – a low indicator can significantly impact the life quality of a person, especially if it is related to an area that is very important for that person (Carver, Scheier 2001, 355). Therefore, if the life quality of a certain group of people is determined without taking into account their own personal comprehension of it, one can obtain results that are far from the actual situation.

According to the EU objective indicators, Latvia, when compared to other countries, has lower salaries, minimum wage and pension, which is one of the reasons for the labour emigration to Western European or Scandinavian countries. At the same time, the strength of Latvia in the field of human resources is the formal education level of a relatively high proportion of the employed population. An interesting finding is the ambiguous link between the level of education and the assessment of the quality of life. As was shown in the research on the quality of life of Latvian population, the graduates of secondary school are less satisfied with their life quality than the ones who have obtained basic elementary school

diploma (Bela-Krūmiņa, Eglīte, 2006, 24). Also, the relatively low assessment of lifelong learning on the increase of life quality points out to the lack of understanding in society. This raises the question on the importance of education on the life quality of the young generation and adults.

Until now it has been researched that young people are attracted to Latvia thanks to family and friends. These are the most important groups for the young people and these form their link with own country. In the age category of 20 - 25 years, important aspects of quality of life are associated with a stable circle of friends and leisure time, education and a good job in the future (Trapenciere, 2006, 151).

Hence, the quality of life includes not only the objective indicators, but also the subjective satisfaction of individuals, their experience, assessment and notion of good life. People's satisfaction with life is subjective and it is relatively independent of the objective circumstances. It has been found that by using different standards for the comparison, satisfaction with life quality can vary considerably (Wrosch, Scheier, 2003). Therefore, it is meaningful to take into account the individuals' subjective understanding of the quality of life. Also, the level of education does not only affect the objective indicators of life quality (e.g. education opportunities, quality, accessibility), but also the subjective indicators (e.g., the motivation to improve one's level of education). Regardless of which university or type of studies the student has chosen, he / she learns to be responsible for the formation of one's own life.

Taking into account the importance of the human resources and potential of young students in the future of the country and the relevance of life quality, the author puts forward the research aim: to determine the comprehension of life quality and its contributing factors among the students in Latvia nowadays.

Methodology

In order to determine the comprehension of life quality among students nowadays, a questionnaire was created with 3 incomplete sentences: 1) "I believe that the human life is of good quality if…", 2) "The quality of my life is promoted by…", 3) "The quality of my life is limited by…". Students were asked to complete these sentences according to their own preconceptions. The questionnaires were distributed at the beginning of the lecture and students needed 3-7 minutes to fill in the questionnaire. All of the distributed questionnaires were filled in and returned. All of these were valid.

The research participants were from the following faculties: English Philology, IT Management and Computer Science, Graphic and Interior Design, Law, Mathematics, Medicine, Psychology, Sociology, Business and Economics. The age group was 20-24 years. The students were selected from four higher education institutions, using the cluster random sampling method. The total number of respondents – 249, 64% of these were women (according to the Central Statistical Bureau data, over the last years in Latvia 62% of all students are females) (Centrālās statistikas…, 2015).

When performing the substantive analysis of the questionnaire, the categories of life quality and the frequency of mentioning these were determined.

Results and Discussions

Comparing the frequencies of the life quality categories, the χ^2 test did not show statistically significant differences between the different faculties (p=0,02) and gender (p=0,01).

When finalizing the first sentence: ***"I believe that the human life is of good quality if…"***, most of the students (e.g., 54% or more than every second student) mentioned the importance of the inner human potential or one's personality traits (Figure 1). The following traits were evaluated: the assessment of what one has, satisfaction with the surroundings and the resulting ability to enjoy life and its small details (19% respondents), harmony with oneself and the surrounding world, e.g., arranged spiritual life (8%), self-realization, namely "when a person does not live only for oneself", "giving joy to others", "participating in helping to improve the lives of other people", "using one's potential", etc. (6%), as well as the student's independence from external factors (social negativity, physical looks, work, etc.), consciousness, completeness, and openness to the new. Another subcategory is purposefulness (13%). Half of the students, who mention purposefulness, state it only – "a person knows what he/she wants", "one has found their aim in life", "there is a goal to strive for", etc., while the other half of these students

also mention the importance of the ability to achieve these objectives (e.g., the existence of willpower, capacity).

The second most frequently mentioned category is interpersonal relationships and relatives (30%). Most often students simply note the existence of family and friends (16%), while others highlight the support they provide (7%), especially – the support with positive emotions and reliability, as well as good relationships and understanding (7%).
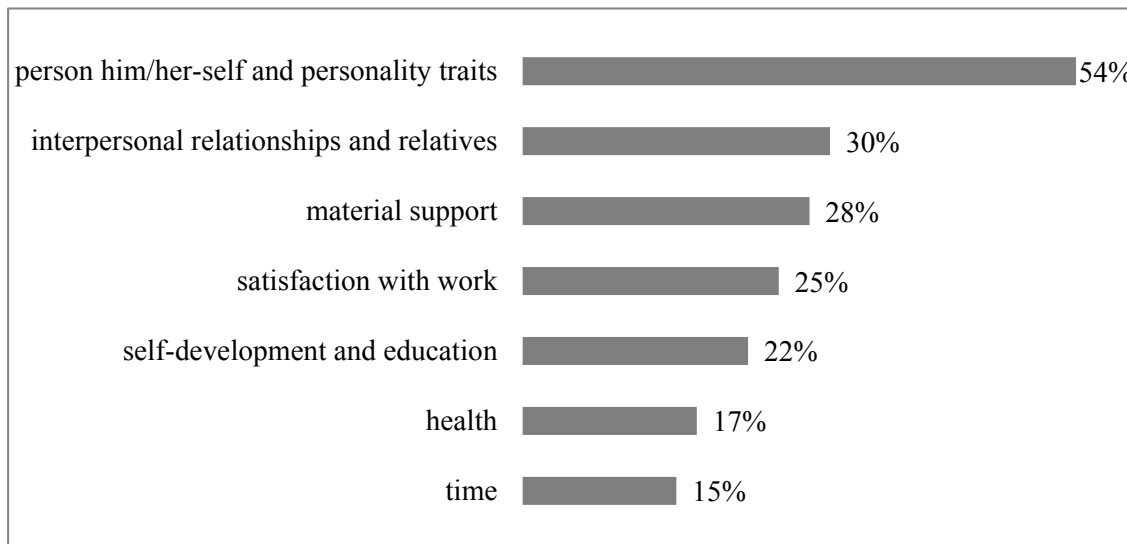
Figure 1. Most frequently mentioned life quality categories when completing the sentence
"I believe that the human life is of good quality if…"
(statistically significant differences between the frequencies, according to the χ^2 test with p<0,001).

Relatively less often (28%) the following category is named: material support, e.g., sufficient financial means for food, clothing, utilities, recreation, etc. Moreover, one fourth of those students, who do mention material support, refer to the role of time, namely, a condition for life quality is not only having enough money, but also enough time for private life and entertainment, not using all the "free time" on earning money.

Almost as often (25%), students mention the satisfaction with their work – human life is of good quality if the student likes their job. Fifth of these 25% students added that they should earn enough money when carrying out this work.

Somewhat less frequently, when completing the first sentence, students refer to self-development and education (22%). This category can be divided into self-development and growth *opportunities* (8%), the *willingness* to learn and develop oneself mentally and physically (7%), the *existence* of education, knowledge, intelligence or experience (7%).

The sixth most frequently mentioned category, when completing the first sentence, is health (17%).

Time dimension can be extinguished as a separate category in students' statements. Often high quality of life is linked to successful time management (the possibility of combining work with studies and leisure), appropriate use of time (8%). If one takes into account the fact that additional 7% of all students consider material support to be important conditional upon having time also for private time and leisure, it can be assumed that time dimension is important for 15% of students, who were completing the first sentence.

Other quality of life aspects that are mentioned include no outside restrictions, e.g., "when one can do what he/she wants", "when wishes can be satisfied without any worries" (7%), to love and to be loved (6%), hobbies and non-work related interests (5%). Less often the following aspects of life quality are mentioned – the confirmation of reality with one's expectations, recreation, opportunity to travel, having a life full of various events, safe environment, safe sex and the absence of anxiety.

It should be noted that 11% of respondents associate quality of life with happiness, that is, they have completed the sentence *"I believe that the human life is of good quality if…"* with "he/she is (feels) happy".

The endings of the second and the third sentence specify the content and importance of the life quality aspects mentioned in the first sentence. Moreover, these indicate the potential solutions for improving the life quality of students.

interpersonal relationships and relatives — 65%
self-development and education — 48%
person him/her-self and personality traits — 37%
material support — 14%
satisfaction with work — 14%
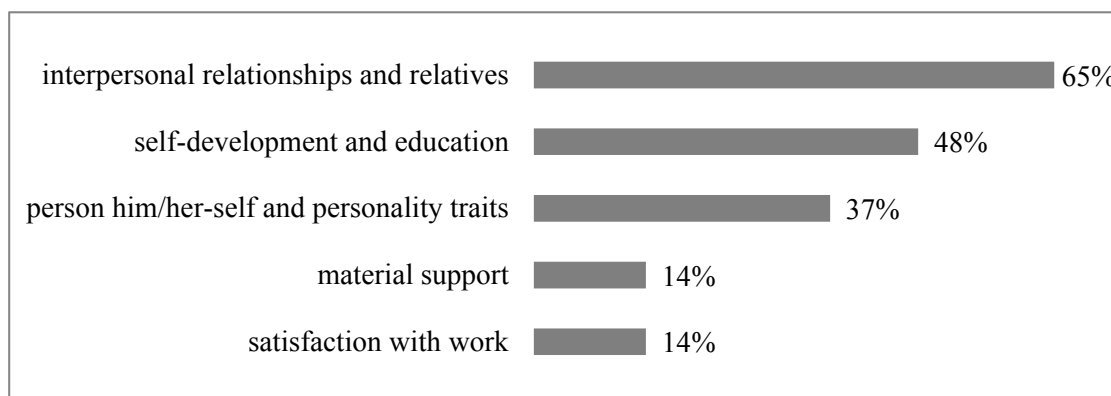
Figure 2. Most frequently mentioned life quality categories when completing the sentence
„The quality of my life is promoted by…"
(statistically significant differences between the frequencies, according to the χ^2 test with p<0,001).

Almost two thirds (65%) of all students mentioned interpersonal relationships and their relatives, when completing the sentence **"The quality of my life is promoted by…"** (Figure 2). Furthermore, half of this group emphasize socializing, interacting with friends, meeting important people for themselves, in some cases, also conversations and discussions with intelligent and open people. Approximately, one fourth of these students mentioned the help and support received from their family and relatives. On the contrary, 3% of the respondents stated that for them more important is giving support rather than receiving it, e.g., making happy and taking care of the relatives.

Almost every second student mentioned self-development and education (48%) as a promoter for their life quality. Most frequently, students mention the *possibility* to study and obtain a good education (14%), self-development (physically and mentally) and having a growth overall (11%). Respondents highlight the merit of school, teachers, and interesting lessons (7%), knowledge (5%), skills (5%), as well as the positive and negative *personal experience* (6%).

The third most frequently mentioned category in the second sentence was the student him/herself and his/her personality traits (37%). This category included endings of sentences not related to the student's knowledge and skills (as previously), but with him/herself and their attitude, e.g., "personal attitude", "my perception of life", "being satisfied with what one has", "I, myself", "my (spontaneous) ideas", "getting to know oneself, one's values", "has a conscious place in life", as well as a number of own personality traits: good faith, willpower, patience, optimism, "the willingness not to be a vertical puddle" (slang for a pessimist), etc. Another subcategory is also related to oneself – purposefulness and the ability to realize one's goals (17%). Examples of this category include purposeful activity, self-motivation, determination, ambitions, and interest to achieve one's goals, "knowing that I can".

Only half of those respondents, who mentioned material support when completing the first sentence, mentioned it as an aspect that would enhance their quality of life (14%). Students state, for example, financial resources, financial stability, opportunity to earn some money during summer, career at work.

Just as often students mention their pursuits in own profession, resp., their satisfaction with own work (14%). In this category, statements about success at work, rather than the financial gains, were grouped, e.g., one's sense of satisfaction with the progress made, satisfaction with work itself.

As other life quality enhancers students state physical activities, e.g., sports or dancing (9%), hobbies (7%) (sometimes students indicate that these help to reduce everyday stress – among these could be physical activities, but it is not specified), health and taking care of it (7%), leisure, recreation (entertainment, going to museums, exhibitions, etc.) (5%), positive emotions and feeling good (5%). Less often respondents mention their environment (house, place of residence), possibility to travel, enough time (for oneself and other people, for leisure and work / studies), ability to receive social security, reputation, respect and praise, nature (also rural areas), balance and stability which gives a sense of security (at work, at school, in relationships), love, diversity and God.
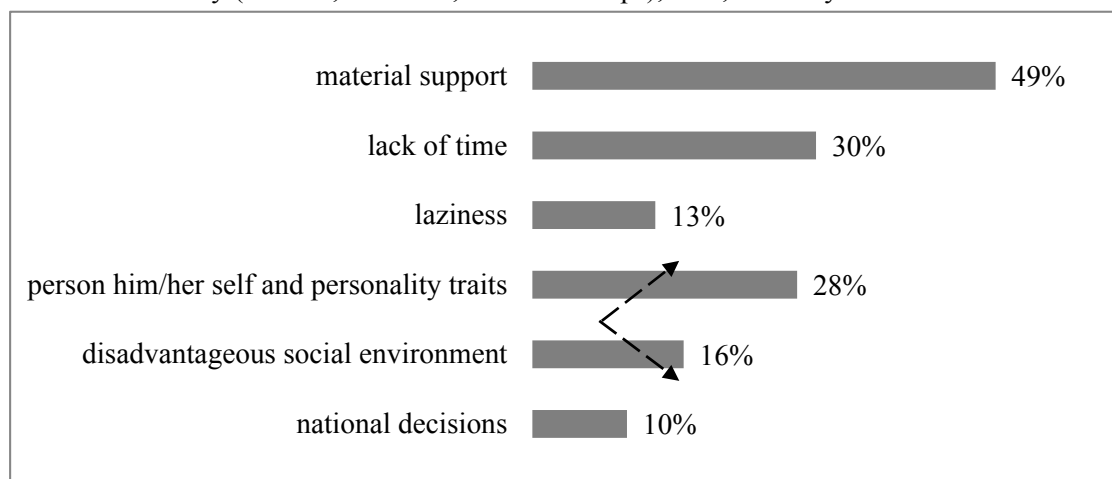
Figure 3. Most frequently mentioned life quality categories when completing the sentence
„The quality of my life is limited by...”…”
(statistically significant differences between the frequencies, according to the χ^2 test with p<0,001).

A different picture can be observed when reviewing the most frequently mentioned categories that have been used to complete the third sentence ***"The quality of my life is limited by…"*** (Figure 3). If the most frequently mentioned categories among aspects *promoting* life quality were interpersonal relationships, own relatives, self-improvement and education, then as the main *limiting* quality of life students most frequently mention material support. This is stated by every second student (49%) citing, e.g., lack of money, economic situation in the country, inadequate remuneration for work, living conditions. 5% of these respondents see limited job opportunities for people with no previous experience.

The second most frequently mentioned constraints that is mentioned is time, namely, lack of time, which is one of the most mysterious aspects of our life today (30%). The problem students cite is "I need to manage things I want to accomplish myself and things that others expect from me", which results in exertion. In some instances, students mention excessive business, working or writing study papers. In fact, one could consider that time has been stated even more frequently, as 13% of students have completed the third sentence by indicating laziness. And students themselves have in many cases explained themselves laziness as "time spent in vain". Laziness can also be referred to the student's personality traits, which is the third most frequently mentioned constraint (28%). Other life quality limiting aspects that students state include: personal imposed boundaries, fear, lack of confidence, disbelief in one's own efforts, lack of courage, self-esteem and motivation, inferiority feelings. Moreover, respondents mention their attitude, inability to appreciate what they have ("stage in life, which I want to end as quickly as possible"). 5% of students emphasize their own decisions and actions taken, resp., incorrect lifestyle, and harmful habits. All this leads to a negative mood: anxiety, stress, nervousness (7%).

The fourth limiting aspect is the disadvantageous social environment (16%) the student is: negativism in the surrounding environment, hostile attitude of other people towards different processes, change, innovation, society with "stagnant beliefs", people who "believe that there is only one correct perception of life" and people who "demand others to behave according to the stereotypes".

On contrary, the fifth limiting category consists of national decisions (10%): the attitude of the country, rules (for example, "I was born in Latvia, but I am not a citizen"), taxes.

Significantly less frequently students mention such limiting aspects as insufficient education (lack of skills and knowledge), lack of experience, inability to achieve one's goals, take advantage of opportunities, health problems, conflicts with others (e.g., disputes with parents), routine ("dull everyday life", "I cannot do what I want, I have to do what I don't want to do") and low quality of studies. 2% of respondents believe that their quality of life is not limited by anything.

Conclusions

- More than 70% of all respondents believe that overall the human life quality is dependent on the person him/herself (own personality traits, ambition, attitude towards life) and on their aspiration and ability to develop oneself. Moreover, students recognize that these are aspects that *promote* their life quality, which shows the student's willingness to take responsibility of one's own life path. Only less than one third of all students linked these aspects to potential *limitations* of their life quality. Furthermore, material support was mentioned as the most limiting aspect of their life quality and only in 14% cases this aspect was stated as promoting their quality of life. This indicates that, according to students, the aspects that promote life quality are different from the ones that limit it, namely, the same things that limit life quality are not the same as the ones that promote it. Lack of financial resources reduces the quality of life at least 3 times more often than having material support that would increase life quality. Self-motivation, interest to achieve one's goals are categories that are mentioned as promoting life quality 10 times more often than the lack of motivation which could limit life quality…This can be explained twofold. On one hand, there are *necessary conditions* for good life quality (e.g., material support), which are not *sufficient conditions* to experience life as of good quality. On the other hand, one can observe that students have more often stated areas which they feel they can influence themselves as promoting conditions, while as limiting factors – those areas that they feel they cannot influence.

- Most often students experience a good life with their beloved ones – important indicators for life quality are family, friends, and their support. For every second student, life quality promoting aspects are also self-development and learning.

- Lack of material support is often stated as a limiting factor for life quality and self-development. So one can conclude that having sufficient income is one of the most important instruments for improving life quality also for students, both on individual and national level. In this respect, a reform of scholarships based on students' financial needs would be needed. Moreover, a greater transparency with regards to the income and expenses of higher education institutions and their faculties would be necessary.

- Besides lack of material support, another existential problem arises – lack of time. On one hand, it is a modern problem for the nowadays' world that is oriented on dialectical materialism. A human being has a sense of existential finality that makes the individual live in an endless hurry and anxiety, while not letting him/her realize why and where they are rushing to. On the other hand, lack of time is related to lack of financial resources in a relatively poor country. A lot of students try to realize this issue themselves by working part-time in addition to their studies. In this way, the balance of recreation and work is dismantled, which results in burnout, health problems, disconnection from family and emigration.

- Taking into account the importance of interpersonal relationships and education for students, one should pay attention to such life quality limiting aspects as other people's negative attitude and a society closed to change and innovation. This implies that a very important aspect also is the social environment that has developed in each higher education institution and the Latvian higher education system as a whole. If this system is closed and there is a vertical management style, then it can become a serious hindrance for the life quality of a student and his/her decision to seek a more human treatment in another country.

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Pupils' Creative Action at an Elementary School: Problems and Solutions

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Abstract: The choice of research theme and its topicality was defined by the existing conflict between theory and practice that nowadays still appears in the teaching of Home Economics and Technologies. On the one hand, the school is supposed to promote pupils' creative potential, but in real life the training process is widely expanded by reproductive activity. The aim of the study was to explore problematic aspects of the elementary school pupils' expressions of creative activity and to reveal their promotion opportunities in the training of Home Economics and Technologies, working with natural materials,

The research used theoretical methods – literature, document analysis and empirical methods – interviews, observation and practical experience analysis as well as mathematical data processing. The study was carried out in Teacher Training and Educational Management Academy and in urban and rural elementary schools of Latvia.

Younger pupils' creative activity is the creativity that is an original creation of the craft, which is a new approach in task solution in the process of knowledge and skills acquisition, in combining the methods of known activity. A problem situation and motivation is relevant for the development of creative activity as the expression of needs and interests which experiences the unity of emotional and intellectual awareness. In the training of Home Economics and Technologies, the precondition of pupils' creative activity development is a variable choice of methodological techniques. Pupils' creative expression activities in the training of Home Economics and Technologies are closely related to the teacher's professionalism to choose methodological techniques promoting creative activity, and to feel that their acquisition is significant for oneself.

Keywords: pupils' creativity, school education.

Introduction

We live in a very complicated period of time, characterized by the rapid rhythm of life, progressive development of science and technology, the change of the paradigm values. For twenty years the society emphasizes the importance of pupils' creativity. Nowadays, there are many publications, descriptions of scientific studies. Since 1999, every year International Conferences of creativity are organized, the Creativity Centre has been founded, which became a RTTEM Creativity Scientific Institute in 2007, as a result of its activity, internationally reviewed proceedings of the conference "Creative Personality" are published every year (Bebre, 2009, 6-8). The year 2009, according to a decision of the European Parliament and the Council is declared to be the year of creativity and innovation.

It is indicated in the regulations of National Standard of Basic Education, syllabus standards of primary school subjects of basic education, and samples of basic education syllabus that one compulsory content component of the subject is the awareness of the one's abilities for the improvement of habitats, i.e., in the aspects of self-expression and creativity (Noteikumi par valsts..., 2014). The training content of Home Economics and Technologies at the elementary school is saturated with a wide theoretical material containing facts. Pupils have no time to feel and experience the joy of creativity.

Speaking of creative work, teachers clearly highlight the importance of creativity, but it is observed in practice that the chosen work organization and methodological techniques ensure reproductive activity. The conflict arises here - on the one hand, the school's task is to promote pupils' creative potential, but in real life the training process is widely expanded by reproductive activity. Content conflicts in Home Economics and Technologies exist in several aspects.

First, there is a conflict between creativity and teacher understanding of creative activity.

Secondly, the conflict between the methods used in the training process, uniformity of working forms and significance of diversity emphasized in theory.

Thirdly, there is the conflict between Home Economics and Technologies training content and its implementation into practice in the aspect of creativity.

Aim of the Article

To cognize problematic aspects of elementary school pupils' creative activity and reveal their promotion opportunities in the training of Home Economics and Technologies, working with natural materials.

Test Question

Pupils'creative activities in the training of Home Economics and Technologies become more efficient, if the teacher chooses more variable methodological techniques in the teaching process, creates case studies, and gets pupils' interested in creative activity.

Methodology

It is possible to find various explanations and definitions of creative activity in the pedagogical and psychological literature (creative activity, creativity, innovation, creative work). The article analyses the literature – open promotion opportunities of Home Economics and Technologies training and pupils' creativity, working with natural materials. Creative activity will be used in the description of the research.

The research used: theoretical method - a literature and document analysis; empirical methods - observation, analysis of pupils' work, analysis of practical experience; mathematical data processing. The study has been carried out in practice schools of Riga Teacher Training and Educational Management Academy – in urban and rural primary schools. 276 respondents took part in the research.

Results and Discussion

In the research on the pupils' creativity, their activation, it is first necessary to find out if there are differences between the adult and pupil's creativity. There are various views on it in literature. M. Teplov considers the activity to be creative if it provides with new, original products of high public value (Теплов, 1961). R. Bebre defines creativity as the liberty to create something new, original (Bebre, 1985). In her turn, N. Picka defines creativity as the adaptation to new, unusual situations, spontaneous perceptual ability, as well as the ability by means of imagination (fantasy) to cover things in a new perspective, originality, ability to find something new, that is, "to invent" (Picka, 1990, 141). With regard to pupils' creative work, N. Picka's definition is the most appropriate, who has characterized creative activity as the ability of the imagination (fantasy) to help find something new, original. According to M.Teplov' definition, pupils' activity cannot be creative, if its products do not have the high public value.

Creativity for younger students is more like innovation, which is the original creation of the product, where as a result of acquired knowledge and skills in the process of work they find a new approach to problem solutions, combining the techniques of known activity. Pupils in the creative process find something new, improve themselves. The discovery is significant directly to them.

In practice it is observed that the pupils' creative activity at school, compared with pre-school, is reduced. As the reason, they most commonly mentioned suppression of pupils' creative activity with the prohibitions to act or a lack of support for creative activity (Hoff, 2003). The creative work is of great importance in a pupil's growth because when creating something new, one discovers and gains new knowledge, skills by oneself. It is observed that pupils, who have a well developed imagination, usually make products creatively at handicrafts, without copying the models - it is their natural reaction to new information. Creative activity is an important place for creative imagination. In the human creative activity, also in handicrafts, it is necessary to have a conscious determination. We made certain that the determination of the younger school-age children is not yet particularly expressed: the pupils are bound by activity itself.

It is observed that when preparing planned patterns, mental activity of pupils is progressing in a particularly intense way. To achieve the consciousness image of sufficient clarity, a pupil strains one's memory and thinking and also has a certain emotional attitude to the imaginary phenomenon. Thinking is of great importance for accomplishing work of this kind. Thinking and operation are closely related.

Practical action is used for solution of unusual tasks, but at the same time, more and more importance, according to V. Hibnere, comes from abstract thinking. She believes that artistic innovation requires both imaginative and abstract thinking (Hibnere, 1977). In practice, it was observed that there are pupils (mostly boys), who are particularly engaged in tasks that require imagination. They create new images, which are sometimes incomparable to reality.

Psychology distinguishes between a numbers of creative activity phases: 1) conception, 2) bearing the conception or maturity, 3) implementation. Among these phases there are different, individually expressed intermediate phases, which are closely related. According to V. Hibnere, these stages are not clear in the younger school-age children's creative activities. They are often twisted; therefore it is even difficult to distinguish them from each other. Pupils are not even usually aware of them in their creative activity. Therefore, the result is the denoting factor when judging about their innovation features (Hibnere, 1977, 15). Motivation is important for promotion of creative activity. Ā. Karpova emphasizes that it is particularly important to understand the motive as the need, value orientation, and form of interest expressions (Karpova, 1994, 96). Motives arise and evolve, and are developed on the basis of requirements. In its turn, the requirements can be viewed as the source of the activity (Karpova, 1994, 25). True creative activities as motivation, admits T. M. Amabile, are characterized by a deep and sustained interest, pleasure, curiosity, satisfaction, positive challenge of a problem (Amabile, 1996). It is observed, if the pupil feels the need to convert various materials (clay, paper, textiles, etc.) into imaginary objects or characters they gain joy, satisfaction, acknowledge themselves at work.

It is to admit that sometimes the material itself arises suggestion. Skillfully organized handicrafts, containing the unity of emotional and intellectual sphere of consciousness, makes it necessary to speculate, search, try, it is a great pupils' creativity facilitator. Interests significantly evolve in the first years of school training, especially the cognition interests. Development of the youngest school-age pupils' learning interest is directly dependent on the teaching organization; therefore there is a considerable cognition that development progresses from the simplest to the most complex, from the known to the unknown. Teachers, realizing the handicraft training content, have to search for the tasks that generate pupils' interest, necessity, the need to carry out the task. At the same time, K.Dēķens's cognition is important that training made with the interest develops the human spirit, remains the mental property for life, urging it to continue the spiritual development. He admits that the only interesting work leads to a real education, raising human values (Dēķens, 1919, 116).

Acting with the interest is the foundation of learning, driving force, which promotes pupils' creative work and encourages further development. The teacher needs to create the situation, to give impetus to the creative work. In one of the schools of practice, the teacher unconsciously created pupils' creative activity – by bringing a stone to class, which encouraged pupils to post around the stone their spatial products (ladybugs). After the accomplished work pupils suggested the teacher to make more animals, insects, birds at the next class to complement to the layout. Pupils were looking for ideas at home that could be made in class. Some of them arrived with the finished product on the next day and with the initiative to prepare together. As a result, the efforts turned into a project that lasted for a month.

Such learning allows students to self-educate themselves, being aware of their values. Also E. Pētersons emphasizes that pupils' direct interest can be used by the teacher most of all and it has to be saved from suppression and restriction by using inappropriate teaching and upbringing methods (Pētersons, 1931, 10). Unfortunately, today the school encounters the cases where the pupils' natural tendency to cognize is being depressed by incompetent actions, as a result, their desire to learn gradually decreases.

A similar situation occurred in the integrated classes where the teacher at the open lesson in form 1 opted for all pupils the same way of working (to cut out two socks from cardboard, and draw their pattern). The task was so simple that one boy, who sat in the back of the classroom, could fulfill not only the current task. He designed the trimmings from the cardboard into the plane and airplane, whose construction was original and simple at the same time. Here was the boy's natural propensity to act according to his interests. The teacher did not even notice the boy's created models, his creative fantasy. It must be admitted that this situation, however, is better than if he was denied the opportunity to construct. It is to assume that regular work without interest causes indifference, and later even dislike.

E. Pētersons also noted that interest is the contrast of indifference. This means that as soon as the pupils lose interest, indifference is "creeping in" subtly but irresistibly. Conversely, if any thing, as recognized by E. Pētersons, is not indifferent, if any object or object content has excited us, internally awakened, created feeling of pleasure and attracted attention to it, then we have a desire to act (Pētersons, 1931, 16). E. Pētersons assumes that interest in the didactic meaning can be talked about only if the condition is continuous (Pētersons, 1931, 17). Lasting joy can exist only if you add volition activity. Interest that breaks out at the beginning as the action of feelings, gains the action of volition and it is later considered as the action of volition. According to the practice, to perform creative tasks or to learn the more difficult work technique, one always needs an effort of volition. N. Picka acknowledges that the basis of volition is the spiritual force and it is based on the value consciousness (Picka, 1990, 83). A teacher's activity is of great importance in the creation of value awareness that evaluates the pupils' progress, gives positive feedback, thus making pupils proud of their ability. In my opinion, volition is built gradually in the long run. In the training of Home Economics and Technologies, it is necessary to take the youngest school-age pupils' features into consideration – general shortage of volition associated with the pupils' lack of skills to work in the long run in accordance with the designated purpose, to resolve difficulties and obstacles.

Therefore, the research included such tasks for the accomplishment of which one needs problematic teaching, because it is based on creative thinking with partly intuitive nature. In the training of Home Economics and Technologies the pupils' intuition becomes apparent, for example, in creative imagination, original conclusions, which are based on previous experience, accumulated knowledge, creating new images. The diversity of natural materials is appreciative material for the initiation of pupils' creative activity. Therefore, in the practical part of the research we examined the pupils' creative activity when working with natural materials, acquiring the handicrafts technology – appliqué work. Diverse teaching methods were chosen for the research (Table 1).

Table 1

Methodological Techniques in Appliqué Works with Natural Materials for Encouraging the Pupils' Creative Activity

No.	Methodological techniques for encouraging the pupils' creative activity
1.	Theme formulation stimulating for imagination. The task is to appliqué from the tree leaves, using different shapes, different colors and different sizes of tree leaves. For example, "Human or Animal in Movement", "My Carnival Costume", etc.
2.	Free choice of material (tree leaves, flowers, branches etc.). The selected natural materials are glued on the base. The task - to complement the appliqué with natural materials, with a particular image or an animal.
3.	Zig-zag base lines are drawn on the selected base with a brush dipped in the glue. Add tiny natural materials (sand, seeds, etc.). After drying and shaking off extra material the task is formulated – by stimulating imagination, to add to the results obtained with the appliqué or drawing, trying to see the image or reproduce an event.
4.	To appliqué (to model) a festive costume on the self-adhesive film.
5.	To appliqué with tree leaves, adding to a drawing or a picture of the calendar.
6.	Pupils' task is to appliqué according to their own intentions with seeds (free choice) or the free choice of natural materials.
8.	Integrated lesson, combining Visual Art with Home Economics and Technologies. The first task – to draw the landscape including water (choose from watercolors', gouache or crayons). The second task is to appliqué a reflection in the water.
9.	The task - to appliqué the tree, using a variety of natural materials, including tree leaves.
10.	Pair or group work - to appliqué on the large format paper some image from children's literature or fairy tales.

The empirical part of the research was carried out in practice schools of Riga Teacher Training and Educational Management Academy. The research compiled full and part-time students' experience

attending the practice in both urban and rural schools, in elementary school classes (276 pupils). The research summarizes the results of the last ten years.

It is to admit that students in the learning process find their ability to study and analyze the literature on creative activity successfully. Difficulties arise when pupils' creativity has to be promoted. We noticed that 32% of students do not understand the nature of creativity and organize pupils' activity at lessons according to the technical drawing or description, or work frontally where all pupils create the same products. In these cases, the pupils do not have case studies and there is no combination of well-known techniques, solutions for new challenges. Analyzing the lesson, students claim that their goal was reached, because each pupil was free to choose the colour of the material, but all the products were similar. It certifies that the students are not able to link theoretical knowledge to practice.

In the continuation of the research the pupils' task was to appliqué a human or animal from tree leaves. Summarizing the results of the research, 56% of respondents had found interesting solutions for their works, while 44% of the respondents included stereotypical solutions in their works (a rabbit, a butterfly, a hedgehog) - images made in the pre-school educational institution. We can find the explanation in A. Vorobjovs's cognition that imagination, like thinking, starts only if there is a case (Vorobjovs, 2000, 112). Therefore, the research was continued, creating case studies and changing the task. Pupils had to make applications from tree leaves "People or Animals in Movement" (Figure 1). Significant results were obtained in those classrooms where teachers before the work evoked a variety of sports, associated movements. However, in this situation there were pupils' works, which rendered images, but there was no movement (23%). The situation improved when teachers included pupils' self-evaluation in the learning process, which contained important criteria "a human or animal appliquéd in motion", and "my innovation in appliqué" Summarizing the results, only 9% of pupils' works displayed no creativity.

The task can be varied similarly, allowing pupils to appliqué on their own with the seeds, as well as to appliqué a tree (free choice of material).

Figure 1. Pupils' applications "Human or Animal in Movement" from leaves.

In the continuation of the research, we searched for new solutions, new teaching techniques. Pupils are given free choice of material (tree leaves, branches, flowers, etc.). The selected natural materials are glued on the base. The teacher encourages pupils to look into the glued natural material to try to see some image or figure and to applicate it with other natural materials. It is to admit that by choosing such a teaching technique, no pupils' works were the same (Figure 2).

Figure 2. Pupils' creative activities, improving the selected tree for the acquisition of a particular image.

Case study and motivation are important for the promotion of creative activity, as the expression of needs and interests. Interesting results were obtained in recent years, during the practice. Pupils in particular were bound with the task where the glued natural material could be supplemented by pupils' drawing (Figure 3). M. Bīlmane's statement regarding these works is significant that pupils' creative activity contains no errors; they should not be even looked there for "(Bīlmane, 1924, 20).

Figure 3. Pupils' creative activities including selected natural materials into a drawing.

After the accomplished work the teacher encouraged pupils to write their vision of the intention. One of the girls from form 2 writes "I picked the mayflower and saw heads with hair. There are many little men and long, long hair. I see that little men are sitting on the bus" (Figure 3, drawing 1). In practice, we observed that the pupils are attracted by the tasks corresponding to their interests. In form 2 the boy writes about his work "It is my jet. I called it "The Quick Swan". I fly in space with it. The plane has two engines. The plane has two cockpits. There are edible things, too. Of course, the food is in tiny capsules. I am glad that I have "The Quick Swan" (Figure 3, drawing 2). We see that creative activity is closely connected with thinking, imagination and fantasy. At this age, according to M. A. Runco, it is topical to have the ability to generate ideas, regardless their realization into the real creative achievements (Runco, 2004). In the continuation of the research, it is possible to achieve creative activity for 100% of pupils if zig-zag base lines are drawn on the selected base with a brush dipped in the glue. Then they add tiny natural materials (sand, seeds, etc.). After drying, the extra natural material is shaken off. The teacher encourages pupils to see a particular image or figure and to complement the appliqué with natural materials or a drawing to obtain a definite image (Figure 4).

Figure 4. Pupils' creative activity, appliquéing with sand.

When leading the research, we ascertained that as a result of lasting joy and volition activities there are higher pupils' creative activity indicators: the creative activity experience has become more variable, positive attitudes to independent creative activity have developed regardless of the environment, they depend on the teacher's professionalism to choose teaching techniques for creativity promotion. The essential creativity contributing factor is the choice of tasks, which contain the unity of emotional and intellectual consciousness sphere. Girls were excited by a holiday dress modeling on self adhesive film. At this age the pupils' imagination is vivid, it is confirmed by the fact that many pupils began playing with semi-finished outfits. By emotionally experiencing pupil's activity achievements, observing them from a pupil's point of view, the teacher creates a general sense of safety, encourages their further action. Thus, they create responsibility for commenced work promoting the pupils for further creative activity.

Pupils' creative work is provided by a methodical technique, if they select the calendar or drawn, painted or prepared in advance texture at the lesson of Visual Art as the basis of the application. Each pupil's selected base is different, which guarantees creative activity. A similar situation is also observed at the lesson where pupils on the previously drawn landscape with water (watercolors, crayons or gouache colors) appliqué the reflection in the water.

In practice, we noticed that pupils enjoyed the teamwork (in a group, no more than four pupils) where pupils on the large paper appliquéd an image from children's literature or a fairytale. We noticed that working in a group and jointly searching for solution pupils enriched their experience of creative activity. After work the pupils discovered with joy that the works looked as in real life. The work carried out and the created painting was the delight not only for pupils, teachers but also for parents. Each pupil was proud both of one's own, and the teamwork. It was proven by their great desire to show this painting to everyone that came into the classroom. We noticed that successful tasks that are relevant to pupils themselves captivate them, encourage their further creative activity.

When leading the research, we ascertained that it is necessary to choose more   techniques, to create case studies, to make pupils work independently, creating an impetus for creative activities, reduce

stereotypical images. A modern teacher is free in the choice of teaching methods, manufacturing a specific product. Implementing the content of Home Economics and Technologies, it is the most significant to respect the pupils' interests, their needs and specific character of a class.

Summarizing the results of the research, we ascertained that the pupils' creative activity in the training of Home Economics and Technologies becomes more efficient, if the teacher in the training process chooses more variable methodological techniques, creates case studies to get pupils interested in the activity with the unity of emotional and intellectual consciousness sphere.

Conclusions

- Creativity for younger students is more like innovation, which is the original creation of the product, where as a result of acquired knowledge and skills in the process of work they find a new approach to problem solutions, combining the techniques of a known activity.
- It is significant for promotion of creative activity to have a case study and motivation, as expression of needs and interests that experience the unity of emotional and intellectual sphere.
- The precondition of pupil's creative activity development in the training of Home Economics and Technologies is a variation of methodological techniques.
- In the training of Home Economics and Technologies, pupils' creative expression activities are closely related to the teacher's professionalism to choose methodological techniques for creativity promotion, to feel their acquisition as significant for oneself.

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Development of Professional

Education and Career

Key Elements of Career and Career Management Definitions in Work with Long Term Unemployed Social Benefits Receivers

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Abstract: In this article theoretical aspects of definitions career and career management are researched in context of career management improvement of long-term unemployed social benefits receivers. The aim of the study was to find key elements in the definitions that might be used in connection with the fore-mentioned group and figure out the differences in defining terms career and career management by different authors which suit best for long-term unemployed social benefits receivers. Theoretical study shown in the article – different scientific sources are researched, such as printed literature, online books, scientific journals and previous researches in that area. The results of the study are the main points that should be emphasized in researching and working with the long-term unemployed social benefits receivers in term of understanding career and career management.

Keywords: career, counselling, planning, unemployment, career management, adult education.

Introduction

The author has been researching the problem of the long-term unemployed social benefits receivers and their career management improvement since 2012 from different aspects. Since then the general level of unemployment decreased in Latvia, in August 2015 the level of unemployment was 8,5% (Reģistrētā bezdarba…, 2015).

In order to start the research the author needs to define the group of people that are called "long-term unemployed social benefits receivers". The long-term unemployed social benefits receivers are able-bodied persons who have received monthly benefits for 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.

Target group is not well researched in Latvia, especially in context of career management. It is important to clarify the key elements in definition career and career management in context of theoretical research and practical work with long-term unemployed social benefits receivers. Information might be important and useful for career counsellors, social workers and other specialists involved in work with the fore-mentioned target group. Career is one of the important definition in process of helping get back into labour market for long-term unemployed social benefits receivers.

Career, nowadays is understood not only as our journey in professional field. Nowadays career includes all different life fields – work, personal development, relationships and all other things that happen with people every day (Kas ir karjera, 2015). According to that career management is a way how people control or manage their life.

Long-term unemployed social benefits receivers have some problems in typical scheme that might be used in the context – during long period of time they are not able (or not wanting) to find a job and improve their financial situation thus abusing local budget and getting social benefits. Not only job problem is timely for that group – often also relationship is disordered, because one family member is not doing well, personal development is also quite problematic in situation when basic needs are not covered (McLaughlin, 1992).

When working with that target group it is important to remember that human's attitude towards situation is quite proportional to the time spent in the situation, obviously, the longer a person is without work and is receiving social benefits, more acceptable his/her attitude is. He/she thinks it is quite normal to live from the benefits, not trying to find a job (Леана, Фельдман, 1995).

In some way that creates an endless circle – they don't have a job and don't want to find it and vice versa. It is important to understand what key points in career context are basic for long-term unemployed social benefits receivers, what is important to emphasize while working with them.

Individuals are expected to build and maintain a positive self-concept, to interact positively and effectively with others, to change and grow through the course of life, to participate in lifelong learning support of their career goals, to locate and effectively use career information, to develop understanding about the relationships between work, society and the economy, as well as to be able to secure/create and maintain work, make career-related decisions, maintain balance among their life roles, develop understanding about the changing nature of life and its roles. They have to be able to understand, engage in and effectively manage their own career-building process. Individual career development is a unique and creative process, influenced by his or her personal characteristics and affected by his or her family, community and cultural values, as well as by geographic, economic and political circumstances (Australian Blueprint…, 2015).

Long-term unemployed social benefits receivers are not able to do so, because everything is connected – social benefits, relationships, job, attitude towards society. It is hard to expect positivity while the basic needs are not covered.

There is a tendency to think that long-term unemployed social benefits receivers are not able to manage their career and that's why they need intervention and help in order to improve social situation there are in. The author considers that long-term unemployed social benefits receivers are their own career managers, but the result is not that successful – they are continuing their career as social service clients and unemployed. The Goal of the professionals involved in work with that type of person is to change attitude and develop skills to move from negative to positive way of acting.

The aim of the study is to define the key elements in terms career and career management that are the most important for long-term unemployed social benefits receivers in order to help professionals involved in work with them to make intervention more precise and effective.

Methodology

Monographic method has been used for this study. Available literature (printed and online versions) about career, career management and unemployment persons was used. The author used sources in Latvian, English and Russian. Previous researches in the field related to the theme of article were used. Statistical data from State Employment Agency was used in order to represent the current level of unemployment in Latvia.

Results and discussion

Working in adults education it is important not only to give them skills and knowledge of a new profession, but also help to understand the world according to the modern development level; to get knowledge how to work with humongous amount of information people get every day; to get and renew communication skills in systems like "human-human", "human-computer", "human-computer-human"; to present them the idea about new social-economic situation; to help them explore and improve their own potential (Колесникова, 2007).

Professional plays a role of reconnecting element for an individual who was out of labour market for long period of time and might be afraid of entering it again, because everything changes so fast and being unemployed individual is not aware of modern trends. Professional should help to make the first steps from comfort zone toward a future job.

There is a connection between time spent as unemployed and individual's attitude towards his unemployment –the longer said individual is not working the easier he accepts his status and the lower estimates his opportunity get back into work. That's why we can conclude that helplessness and negativity grow up proportionally to the time spend without job (Леана, Фельдман, 1995).

When working with long-term unemployed social benefit receivers it is important to remember that professionals need to emphasize not only the process of job searching (because it is the goal of professional intervention), but also to maintain their psychological health and help them stay positive and active not only like a job seeker, but also like a human being.

Families (if they have one) are pushing them, because for a family it is also painful that one of the members is not employed, so family might have additional financial risks. Working with long-term

unemployed social benefits receivers it is important to help them maintain positive relationships with family members and in case of need involve them in the process of consulting such a person.

Unemployment has a strong impact on an individual's personality – psychological health, self-acceptance, welfare and self-effectivity (Lee, Johnston, 2001; Creed, Bloxsome, Johnston, 2001).

That's why it is important to use theoretical knowledge about long-term unemployed social benefits receivers while working with them in groups or individually – what kind of changes happens in their acting and thinking. It is good to remember to emphasize that long-term unemployed social benefits receivers are able to study new skills, knowledge, information not only theoretically, but also to use it practically in order to get a job or become more active socially and economically.

Only in the end of the 20th century scientists started to define career not only as change of the position in the work place or just the way to financial welfare. In 1980 D. Super proposed that career is consequent employment, job positions, tasks that person fulfil during life (Super, 1980). In the end of 1990th and at the beginning of the 21st century career is understood as person's life and separate life stage changes (such as work, family, free time). Career is not only connected with the job it is a part of general social activity which is influenced by all decisions made by person (Толочек, 2005).

Career development includes not only profession, but whole person, with his changes and activities. Relationship with important people, responsibility for children, parents, whole structure of obstacles are important to include in career guidance process (Wolfe, Kolb, 1980).

Nowadays the most important role in career took charge**.** Employers, clients, competition and many other factors asking from person activity, responsibility, ability to adjust fast to a new environment – people are able to change their fields of professional interest widely. Career development is connected not only with getting financial freedom, but also with mental values, possibility to achieve dreams and get satisfaction from process and result (Vorončuka, 2009).

Not only positive types of career are familiar today – long-term unemployed social benefits receivers also are making their career every day – as social service clients, as job seekers. That type of careers might be more or less marginal. They are trying to show their ability to act and achieve something by visiting many governmental organizations in order to receive benefits that they "earned"- it takes a lot of time, energy, strengths. For them it is hard to understand that society is asking from them to seek and find a job (Reardon, Lenz, 1999).

Career is consecutive with job related positions changes, roles and activities which human encounter thought life (Haase, 2007).

Career is a lifelong process of work-related activities and its development is an on-going series of stages characterized by unique concerns, themes and tasks (Simosi, Rousseau, 2015).

While working with long-term unemployed social benefits receivers it is important to emphasize development – it means changes and moving forward from existing situation not only in the work field, but in all life aspects, because starting changes in one of the aspects changes everything. It would be hard to overestimate importance of searching job which is crucial in changing their status of long-term unemployed. Finding job means also changes in financial fields – individual is able to be independent. Being employed also means having positive attitude as well as self-acceptance and mental stability (Figure 1).
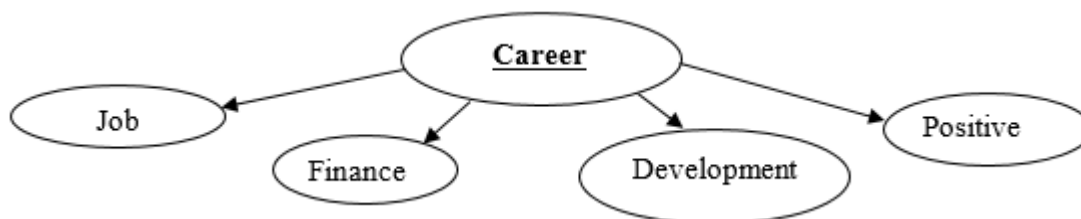

Figure 1. Key elements of term "career" in work with long-term unemployed social benefits receivers.

Nowadays individual career can give society not only benefits, but also become a burden and in order to exceed it, individual should be taught how to manage his career, how to plan his future and succeed.

Riga Social Service doesn't offer career management or career development consultations for long-term unemployed social benefits receivers; they are able to get consultations from psychologist and social worker.

Career management is a complicated process during which individual knowledge, skills, and experience in order to create and manage their own career is activated (Australian Blueprint…, 2015).

Speaking about long-term unemployed social benefits receivers and working with them crucial is to find and maintain job, because the lack of it produces huge amount of different problems. While working with them in order to motivate to find a job it is important to emphasize that regular job is very important if they want to function well and fit into society. Nowadays individuals are expected to manage their own careers (McMahon, Tatham, 2008). Long-term unemployed social benefits receivers are able to maintain and manage their own way of marginal career. Professional's goal is to help them to move forward from managing destructive and unproductive types of career.

Career is very closely connected with employability possibility to find, maintain and improve job position or job relationships (Jaunzeme, 2013). Having a corporate job or any other type is important not only for financial result of it (getting regular salary that allows to function independently in society), but also it gives an opportunity to build and improve relationships with people, give and receive from society and develop his/her own personality.

Having a job is not only important for managing career successfully, it is important for having positive career management self-esteem, because people are active their own life obstacle makers and they make changes (wishing it or not) (Bandura, 1977; Бандура, 2000).

Self-esteem and career management self-esteem is second basic element in work with long-term unemployment social benefits receivers.

The key part of successful career management is planning (Figure 2). Mostly, long-term unemployed social benefits receivers have problems with planning not only in term of career, but also in general life planning (Snower, 1994). They are out of "system" living they do not need to get up early every day, be active, be on time, do certain things on time. They do not have a job in their life and said job, mostly, is the main object of planning for people, because it takes a lot of time from daily time amount.
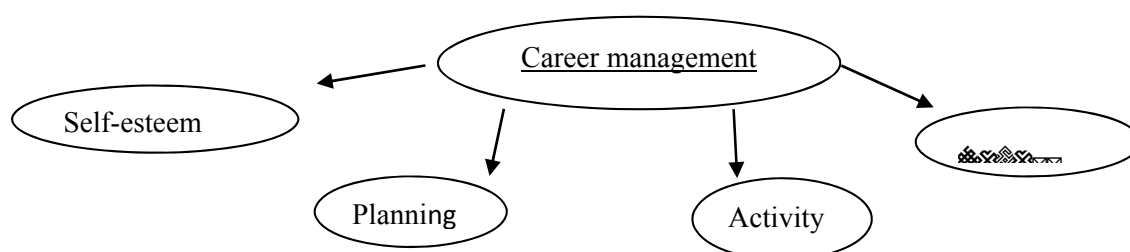
Figure 2. Key elements of term "career management" in work with long-term unemployed social benefits receivers.

Long-term unemployed social benefits receivers in order to improve their social situation and be able to find a job need to have positive self-esteem and be able to plan their life. Not only are these two obstacles important.

According to B. Hiebert career development is a lifelong process of managing learning, work, and transitions which desirable result is achievement of individually significant, self-defined aims approaching desirable life style (Hiebert, 2006). In order to have successful career development individual needs to have a vision of future and how he wants his career to be like, having a vision and planning how to get there means productive career management.

Long-term unemployed social benefits receivers assess their career management as an average (Pāvulēns, Bičkovska, 2013). For professionals it means that target group needs assessment for improving career management, when working with them it is important to emphasize planning, vision (or how they see their future), to raise activity and self-esteem.

Career and career management definitions are crucial in researching reasons of individuals being long-term unemployed social benefits receivers. Persons who now are active clients of Social Service were educated at that period of time when no one thought that it is important to teach children career planning and management that's why most of them are not able to see holistic picture of existing situation as well as services doesn't offer that type of counselling. Author with her further researches and activity in the field is hoping to bring changes and awareness to Riga Social Service in order to create and invent new service for long-term unemployed social benefits receivers.

Conclusions

When working with long-term unemployed social benefits receivers and researching them it is important to remember and emphasize the following aspects:
- key elements of terms career and career management are found and described in article; during years of researches the understanding of term career changed from job related activities to holistic view on person and all processes that it is involved in;
- working with long-term unemployed social benefits receivers and trying to help them move their career forward it is important to remember that career includes the following aspects – job, finance, changes, mental health, positive attitude; working with career management and improving it, professionals need to emphasize – self-esteem, planning, activity, vision;
- long-term unemployed social benefit receivers are having experience of building marginalized, negative type of career. Professional should help them change way of putting impact from negative to positive, from marginalized to socially acceptable. The role of professional involved in work with long-term unemployed social benefits receivers is to change individual's attitude and moving skills, experience from marginalization to development;
- work might be done and results might be achieved only in case when a person is ready for changes and is willing to work with internal aspects of unemployment; before starting career counselling or any other type of work it is productive to find out individual's attitude towards mentioned questions – if they are strictly negative it is not worth to start collaboration.

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Scientific and Everyday Understanding of the Notion of Career

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Abstract: Career guidance has to be grounded on viable theories and concepts consistent with one's experiences to enable people (counsellors as well as clients) to make predictions about their career. Therefore, development of viable theories and concepts has to be a two-way process, including theoretical studies and investigation of individuals' experience in real life activities. The aim of the study was to get insight into scientific and everyday understanding of the notion of career. Several career theories and career concepts were briefly analysed. To find out the words and phrases people would use to define the notion of career, the empirical part of the research was provided. The participants were asked to define notions of career and successful career by completing sentences *Career is…* and *Successful career is…* Words, phrases and sentences were categorized into twelve categories: 'work', 'satisfaction', 'self-regulation', 'sequence', 'earnings', 'personal development', 'results', 'external evaluation', 'suitability', 'lifelong process', 'entrepreneurship', and 'interaction'. The categories which were used more often by the respondents to describe the notion of career were as follows: 'work', 'satisfaction', 'self-regulation', 'sequence', and 'earnings'. The participants used categories from 1 to 8 to describe their careers. Differences in the number of categories among the status subgroups are statistically significant; differences in the number of categories among the subgroups of gender are not statistically significant. Younger participants use more categories in their definitions of career and successful career.

Keywords: career, individual human potential, work, career education.

Introduction

Seven years ago the Life Design International Research Group questioned functionality of current career development theories and techniques (Savickas, Nota, 2009). This problem is also topical at present.

In the rapidly changing world lifelong career guidance becomes an everyday reality; therefore advice and support in this area have to be grounded on viable theories and concepts. Viable theories and concepts are mental constructs that have to satisfy the constraints of reality, i.e., they have to be consistent with one's experiences and able to fulfil an intended purpose (e.g., to enable people to make predictions about certain phenomena). (Hardy, Taylor, 1997; von Glasersfeld, 1984). According to W. Patton (2008, 133), "career theories need to be appropriate for the complexity of individuals living in a complex world". Therefore development of viable theories and concepts has to be a two-way process, including theoretical studies and investigation of individuals' experience in real life activities.

This determines the course and the structure of this study. Firstly, the most important career aspects (dimensions) of career theories will be given. Secondly, the understanding of career notion based on real life experience of different subgroups of respondents will be studied.

The research questions are as follows:

1. What are the most important dimensions (aspects) of the contemporary concept of career?

2. Which are the most frequently used categories to characterize the notion of career?

3. Are there any statistically significant differences in the usage of categories between genders and among different subgroups of respondents?

Methodology

To achieve the aim of the research several career theories and career concepts were briefly analysed. General scientific methods such as analysis and synthesis, induction, deduction, and analogy were used

in the research. To find out the words and phrases people would use more often to describe notions of career, the empirical part of the research was provided.

There were 99 participants from the Latvian rural secondary schools, 50 boys and 49 girls, 13 to 17 years of age (M_{age}= 14.76, SD = 0.65), 63 female and 24 male 1st year students from the Latvia University of Agriculture (LUA), 18 to 22 years of age (M_{age}= 19.10, SD = 0.68), and 108 unemployed persons registered with the State Employment Agency, 77 females and 31 males, 26 to 59 years of age (M_{age}= 35.97, SD = 10.90). There was a proportionate number of respondents in status subgroups (χ^2 = 2.26, p = 0.32); a number of respondents in gender subgroups was not proportionate (χ^2 = 24, p < 0.01) as 2/3 of respondents were females. Analogous disproportions were found in the group of unemployed persons (2/3 of respondents were females) and in the group of university students (¾ of respondents were females). In the subgroup of secondary school students, the number of male and female respondents was approximately equal.

The participants were asked to specify their gender and age and to define notions of *career* and *successful career* by completing sentences *Career is…* and *Successful career is….*, printed on a A6 worksheet.

The worksheets were handed out to the participants who after filling them out personally returned them back to the researcher. The worksheets were filled out in the classrooms, and in the waiting rooms of the State Employment Agency (Riga and Aizkraukle Branch Offices).

Definitions of career and successful career were content-coded together, coding units (words, phrases or sentences) were categorized into one of twelve domains (categories): *work* (such units as 'occupation', 'job', 'working', 'profession', 'trade', etc.), *satisfaction* (e.g., 'satisfaction', 'joy', 'pleasure', etc.), *self-regulation* ('purpose', 'intention', 'purposeful choice', 'setting and attainment of personal goals', etc.), *sequence* ('sequence', 'succession', 'career ladder', 'gradually', etc.), *earnings* ('wages', 'gain', 'salary', 'money', etc.), *personal development* ('improve myself (yourself)', 'gaining knowledge', 'learn new skills', etc.), *results* ('achievement', 'success', 'objective results', 'outcomes', 'performance', etc.), *external evaluation* ('advancement', 'promotion', 'respect', 'regard', 'admiration', etc.), *suitability* ('fitness', 'be able to do well what must be done', 'competent', 'capable to perform', etc.), *lifelong process* ('it begins in childhood', 'during working age and later', 'it continues throughout life', etc.), *entrepreneurship* ('business', 'own business', 'to manage', 'self-employed', 'boss', etc.), and *interaction* ('balance of life domains', 'family support', 'cooperation', etc.). The aim of the research was to find out categories (not to count units in each category); a category was mentioned if at least one coding unit fell in the category.

Data coding was carried out by an independent researcher not involved in and not informed about the aims of the research.

To find out the proportion of categories, the number and relative frequencies of each category were calculated in the whole group and separately in male and female subgroups, students' subgroups (secondary school and university) and the subgroup of unemployed.

R 3.2.3 and MS Excel 2013 were used to process the research data.

The descriptive statistics indicators (Mean (M), Standard Deviation (SD), Median, Quartiles, and Range) were calculated. The non-parametric criteria – Spearman's rank correlation (r_{Sp}) and Pearson Chi-squares (χ^2) were calculated analysing differences of distribution among the subgroups.

Results and discussion

While carrying out the theoretical analysis of the scientific literature on career development, it was found out that early career theories, influenced by the logical positivist worldview, were focused on the *content of career choice* and on the *fit between person and environment*. Developmental theories described the *process* and *stages* of career development. Later, cognitive and social cognitive theories put emphasis on cognitive processes in career development; particular theories were focused on career contexts. More recently, constructivist researchers have focused on career *self-regulation* (e.g., *career self-management*) and *career self-construction* (Patton, 2008).

New theories and conceptions are built on the basis of previous ones; development of theories and conceptions is a sequential process where dominant theories and conceptions of a prior era never completely disappear, they are transformed and integrated in new theories and conceptions. Therefore definitions of career and successful career also are changed gradually. During the last century "an old-style classical approach to careers focused on external measures, such as *status* and *financial reward*", nowadays internal dimensions of career – "how a person sees the development of their own career in terms of inner *values, goals, and aspirations*" become more explicit (Baruch, 2004, 43, 74).

Career more often was defined as a work-related activity (e.g., "the pattern of work-related experience" (Greenhaus, Callanan, 2010, 10), "an evolving sequence of a person's work experience over time" (Arthur, 2008, 166), "the sequence of employment-related positions, roles, activities and experiences" (Bosley, Arnold, 2009, 1493), or at least as an "interaction between work, learning and privacy" (Izglītības likums, 1998). Career is also defined as *a sequence of job opportunities* (DeFillippi, Arthur, 1996, 116) and as *the totality of work - paid and unpaid - one does in his/her lifetime* (Sears, 1982, 138). Career is a work-related process, whenever the social organisation of work changes, career theories and conceptions have to be improved (Savickas, 2008).

Relationship between work and career seems ambiguous in the above definitions. I agree with J. DesJardins (2013, 103) that "a career signifies the development of a relationship between the self and the activity of work" because "individuals and work exist in a reciprocal relationship", and "the work is the primary activity through which people develop their full potential" (DesJardins 2016, 429-430). If career is a work-related activity and the work is an activity where individual human potential develops, the notions of individual human potential and development of this potential are the key concepts to understand career and career development.

Based on the findings of O. Ivanov (Иванов, 2012), I define individual human potential as an aggregate of systems of individual's general and specific needs and competences created in interaction with social environment to carry out personally and socially meaningful activities, main social roles and functions. The activity is a necessary condition to fulfil individual human potential, therefore individuals have to search for suitable activities to fulfil (use and develop) human potential, usage and development are two inseparable parts to fulfil individual human potential.

According to the definition, human potential has to be multidimensional and multicomponent; dimensions and components of individual human potential depend on the system of individual's activities where individual human potential is fulfilled (individual's life-activity). For example, J.Reznik suggests the professional (or vocational), communicative, cognitive, spiritual and reproductive potentials as the main components of individual human potential (Резник, 2007), T.Zaslavskaya considers sociodemographic, socioeconomic, sociocultural and activity potentials as four interconnected, relatively independent components of human potential (Заславская, 2005). Based on the findings of O.Ivanov, D. Leontiev, J.Reznik, T. Zaslavskaya, E.Deci and R.Ryan (Иванов, 2012; Леонтьев, 2011; Резник, 2007; Заславская, 2005; Deci, Ryan, 2012), I conclude that the three main interconnected, relatively independent components (subsystems) of individual human potential are as follows: *potential of particular activity*, *social potential* and *potential for self-regulation*; potential of particular activity related to the basic psychological need for competence is a necessary condition to carry out a particular activity, social potential related to the need for relatedness to others is a necessary condition to create a socially meaningful activity, potential for self-regulation related to the need for autonomy is a necessary condition to form a personally meaningful activity. Individual human potential can be fulfilled only if all components (*potential of particular activity, social potential and potential for self-regulation*) are fulfilled; therefore individuals have to search for activities which are sufficient to meet *all* basic psychological needs (Deci, Ryan, 2012) and to fulfil *all* components of individual human potential.

Therefore I broadly define career as fulfilment (usage and development) of human potential. My understanding of career paths, career success, career self-management and career guidance is based on the previous assumption. An individual career path is really individual, it depends on the way how the content of each component (needs and competences) is fulfilled (used and developed). According to the definition, career constantly is career *in* a particular activity, e.g., career in sports, career in politics, etc.

Individuals fulfil their potentials in social activities (Иванов, 2012); consequently criteria of career success have to be twofold – social and individual. In successful career individual fulfils his/her human potential and at the same time contributes to sustainability of society (community, institutions, groups, and individuals). The above has to have a focus also on career self-management and especially on career guidance because society (organizations, institutions, groups, individuals) has to be interested in the way individual fulfils his/her potential. These ways may be prosocial or asocial, useful or harmful, and the role of career guidance (especially of career education) is to contribute to the first one and to impede the second.

Individuals choose work activities to fulfil their human potential and work roles undertaken by an individual to "enable or impede fulfilment of human potential" (Jackson, Leon, 2010). If "the work is the primary activity through which people develop their full potential" (DesJardins 2016, 429), the primary type of career has to be career-in-work.

It is necessary to clarify the definition of work. Work is "sustained, conscious paid and/or unpaid effort <…> aimed at producing societally acceptable benefits for oneself and/or for oneself and others" (NCDA, 2008), broadly - any general activity requiring perseverance, diligence, and concentration (DesJardins, 2016, 429). "Socially acceptable benefits" may be both material and mental, nowadays the knowledge work, utilization of intellectual potential or "intellectual capital to create, teach and solve problems" (Norden, 2006, 449) becomes more and more important.

Obviously, nowadays the work and learning become inseparable, expression "*mācību darbs*" (literally - learning work, in Latvian) is an appropriate characterization of contemporary society. The concept of work expands, so the notion of work includes not only employment, but also learning and leisure time activities where socially accepted material and mental benefits for oneself and/or for oneself and others are created during relatively sustained, conscious paid and/or unpaid effort.

So the notion of primary career (career-in-work) has to include fulfilment of human potential not only in employment, but also in all situations where an individual works (creates socially accepted material and mental benefits for oneself and/or for oneself and others).

It can be concluded that career as fulfilment of human potential in work has personal and social dimensions, it is performed and managed by an individual in cooperation with society (organizations, institutions, groups, individuals), it is successful provided individual human potential is fulfilled in the way which contributes to sustainability of society (community, institutions, groups, individuals) at the same time. Achievements at work and career success are not the same, e.g., high achievements at work may be associated with unsuccessful career in case individual human potential is not fulfilled (e.g., is only used but not developed) in this kind of work and vice versa.

To compare the above conclusions and the understanding of the notions of career and successful career among different groups of population, the empirical part of the research was provided.

Table 1

Number of categories mentioned in the subgroups

Statistical indicators	Unemployed, n =108	Students (university), *n = 87*	Students (secondary school), *n = 99*	Male, *n=105*	Female, *n=189*	Sample, *n=294*
Median	3	4	4	3	4	3.5
Min value	1	1	2	1	1	1
Max value	6	8	6	6	8	8
1st Quartile	2	3	3	3	3	3
3rd Quartile	4	5	4	4	4	4
Range	5	7	4	5	7	7

To find out the proportion of categories, the number, relative frequencies and statistical indicators for each category were calculated in the whole group and separately in male and female subgroups, students' subgroups (secondary school and university) and the subgroup of unemployed. The number of

categories (Table 1) differs among the status subgroups, difference is statistically significant ($\chi^2 = 38.09$, $p < 0.01$). Statistically significant difference is not found among the subgroups of gender ($\chi^2 = 7.78$, $p = 0.25$).

Statistically significant negative weak correlation was found between the participants' age and the number of categories ($r_{sp} = -0.19$; $p < 0.01$), it means that younger participants use more categories (wider lexicon) to describe career and successful career.

To explain the notion of career, coding units from category 'work' were used by more than 4/5 participants (Table 2). Half as many participants used words or phrases that match such categories as "satisfaction", "self-regulation", and "sequence".

Table 2

Respondents which used coding units from particular category (subgroups of gender)

Category	Subgroup	Frequency		χ^2	p-value
		n	%		
Work	Male, n = 105	86	82	0.54	0.46
	Female, n= 189	161	85		
Satisfaction	Male, n = 105	37	35	2.64	0.10
	Female, n= 189	85	45		
Self-regulation	Male, n = 105	38	36	1.06	0.30
	Female, n= 189	80	42		
Sequence	Male, n = 105	37	35	0.71	0.40
	Female, n= 189	76	40		
Earnings	Male, n = 105	33	31	0.77	0.38
	Female, n= 189	69	37		
Personal development	Male, n = 105	27	26	0.06	0.81
	Female, n= 189	51	27		
Results	Male, n = 105	20	19	0.88	0.35
	Female, n= 189	45	24		
External evaluation	Male, n = 105	19	18	0.01	0.93
	Female, n= 189	35	19		
Suitability	Male, n = 105	12	11	2.20	0.14
	Female, n= 189	34	18		
Lifelong process	Male, n = 105	16	15	1.73	0.19
	Female, n= 189	19	10		
Entrepreneurship	Male, n = 105	14	13	0.32	0.57
	Female, n= 189	21	11		
Interaction	Male, n = 105	12	11	0.69	0.41
	Female, n= 189	16	8		

When comparing the number of participants which used particular categories, statistically significant differences were found among the subgroups of status (Table 3). More than 9/10 secondary school students used work-related words or phrases to describe career, the proportion is lower in the groups of unemployed and university students ($\chi^2 = 7.84$, $p = 0.02$). Only 1/5 of unemployed participants used the category "satisfaction" to describe the notion of career, the proportion is at least twice as high in the groups of students ($\chi^2 = 33.59$, $p < 0.01$). Only 1/4 of secondary school students used words and phrases from the category "sequence" to describe notions of career and successful career, the proportion is almost twice as high in the groups of unemployed and university students ($\chi^2 = 11.10$, $p < 0.01$).

Table 3

Respondents which used coding units from particular category (subgroups of status)

Category	Subgroup	Frequency		χ^2	p-value
		n	%		
Work	unemployed, n= 108	84	78	7.84	**0.02**
	students (university), n= 87	72	83		
	students (secondary school), n = 99	91	92		
Satisfaction	unemployed, n= 108	24	22	33.59	**< 0.01**
	students (university), n= 87	55	63		
	students (secondary school), n = 99	43	43		
Self-regulation	unemployed, n= 108	34	31	5.98	0.05
	students (university), n= 87	42	48		
	students (secondary school), n = 99	42	42		
Sequence	unemployed, n= 108	50	46	11.10	**< 0.01**
	students (university), n= 87	38	44		
	students (secondary school), n = 99	25	25		
Earnings	unemployed, n= 108	36	33	0.14	0.93
	students (university), n= 87	31	36		
	students (secondary school), n = 99	35	35		
Personal development	unemployed, n= 108	36	33	6.44	**0.04**
	students (university), n= 87	15	17		
	students (secondary school), n = 99	27	27		
Results	unemployed, n= 108	14	13	14.69	**< 0.01**
	students (university), n= 87	31	36		
	students (secondary school), n = 99	20	20		
External evaluation	unemployed, n= 108	20	19	0.01	0.99
	students (university), n= 87	16	18		
	students (secondary school), n = 99	18	18		
Suitability	unemployed, n= 108	14	13	3.51	0.17
	students (university), n= 87	11	13		
	students (secondary school), n = 99	21	21		
Lifelong process	unemployed, n= 108	6	6	15.44	**< 0.01**
	students (university), n= 87	7	8		
	students (secondary school), n = 99	22	22		
Entrepreneurship	unemployed, n= 108	4	4	12.24	**< 0.01**
	students (university), n= 87	17	20		
	students (secondary school), n = 99	14	14		
Interaction	unemployed, n= 108	13	12	5.23	0.07
	students (university), n= 87	11	13		
	students (secondary school), n = 99	4	4		

Statistically significant differences were found also in the usage of words and phrases from the categories 'personal development' and 'results'. A small amount of university students (less than 1/5 of respondents) used units from the category 'personal development' to describe notions of career or successful career, the proportion is almost twice as high in the groups of unemployed and secondary school students ($\chi^2 = 6.44$, p=0.04). Less than 1/6 of unemployed respondents used the units from the category 'results', the proportion is higher in the groups of students ($\chi^2 = 14.69$, p < 0.01). Four

unemployed participants used coding units from the category "entrepreneurship" in their definitions of career, the proportion is at least three times higher in the groups of students (χ^2 = 12.24, p < 0.01). Approximately 1/5 of secondary school students used words from the category "lifelong process" to describe the notion of career, the proportion is almost three times lower in the groups of unemployed and university students (χ^2 = 15.44, p < 0.01).

When comparing distribution of the relative frequencies of categories in subgroups of gender and status, it was found out that differences were not statistically significant (Table 4).

Table 4

Relative Frequencies of Categories

Category	Unemployed, n =108	Students (university), n = 87	Students (secondary school), n = 99	Male, n=105	Female, n=189	Sample, n=294
Work	0,25	0,25	0,21	0,25	0,23	0,24
Satisfaction	0,07	0,12	0,16	0,11	0,12	0,12
Self-regulation	0,10	0,12	0,12	0,11	0,12	0,11
Sequence	0,15	0,07	0,11	0,11	0,11	0,11
Earnings	0,11	0,10	0,09	0,09	0,10	0,10
Personal development	0,11	0,07	0,04	0,08	0,07	0,07
Results	0,04	0,06	0,09	0,06	0,07	0,06
External evaluation	0,06	0,05	0,05	0,05	0,05	0,05
Suitability	0,04	0,06	0,03	0,03	0,05	0,04
Lifelong process	0,02	0,06	0,02	0,05	0,03	0,03
Entrepreneurship	0,01	0,04	0,05	0,04	0,03	0,03
Interaction	0,04	0,01	0,03	0,03	0,02	0,03

Conclusions

Based on the results of the study, the following conclusions were made:
- the most important dimensions (aspects) of the contemporary concept of career are work and fulfilment of individual human potential;
- the categories which were used more often by the respondents to describe the notion of career were as follows 'work', 'satisfaction', 'self-regulation', 'sequence', and 'earnings';
- participants use categories from 1 to 8 to describe their careers; differences in the number of categories among the status subgroups are statistically significant; differences in the number of categories among the subgroups of gender are not statistically significant; younger participants use more categories (wider lexicon) in their definitions of career and successful career;
- there are no statistically significant differences in the usage of words and phrases from elicited categories between the genders; statistically significant differences were found in the usage of words and phrases from such categories as 'work', 'satisfaction', 'sequence', 'personal development', 'results', 'lifelong process', and 'entrepreneurship' among different subgroups of respondents.

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Factors Influencing Women's Career Change

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Abstract: The paper deals with the results of research on the factors influencing women's successful careers. The research aim is to identify the most important women's skills, personal qualities and the factors that affect women's career change or career choice. A questionnaire survey of women was carried out to achieve the aim. The number of respondents was 1087. The survey found the most important influencing factors in women's career development were the education level, the number of jobs in the place of residence and the psychological climate at the job. The research found that the most essential personal qualities were as follows: purposefulness, enterprise and insistence, ability to organise one's own work and abilities to work in a team and make decisions independently. The research will contribute to the understanding of the factors influencing women's successful careers and their role in cases of women's career change or unemployment. Career counsellors and personnel selection professionals may use the findings in their career counselling.

Keywords: women career, personal qualities, skills, factors influencing careers, adult education.

Introduction

Lifelong education policy in Latvia is based on an idea that the personal growth and self-enhancement of individuals have to be promoted at each stage of their life and in all spheres of life throughout the entire lifetime, thereby creating prerequisites for building up every resident's enterprise and adaptation abilities and contributing to social inclusion, employment and active civil participation (Par programmu..., 2009; Mūžizglītības politikas..., 2007/2009; Mūžizglītības politikas…, 2011; Mūžizglītības politikas…, 2013).

Since individuals usually get their first profession early in their life, their profession change most often takes place at the adult age, although for women the situation may be different – an early family life and bringing up children can hinder getting the basic profession. Therefore, lifelong education enables individuals to learn and enhance themselves within their profession, thereby reaching a higher qualification level, or to get another profession and reintegrate into the labour market and to get satisfaction and bring success.

American scientist and pedagogue D. R. Wetzel did research on adult and lifelong education in the USA. He writes that lifelong education is essential nowadays to all employees – those who currently work and those seeking a job – and that it is required to persistently renew and expand working skills. It is important to discuss problems together with adults, considering further education that focuses on a college degree or a master's degree and their advantages and, at the same time, doubting about financial costs and the time spent to acquire a degree. He gives a simple answer to clients – working in the same company for the entire lifetime is now a rare phenomenon, as there is real global competition. Consequently, the majority of adults are forced to change their careers several times during their lifetime. Accordingly, their knowledge and skills have to be continuously renewed and expanded. These and other reasons are present, therefore lifelong education is necessary (Wetzel 2009a, Wetzel, 2009b).

The successful choice and development of a career is influenced by the skills acquired at school and in the life, and there are also various exogenous factors that affect women's career change in various life situations.

One of the research studies carried out by D. Bite at LLU focused on Women's Professional Careers in Small Towns, in which she found that in small towns the social environment and infrastructure were closely associated with the employment situation; therefore, purposeful career growth was possible only in a limited number of professions and jobs. Women most often implement their professional careers in the so-called women's professions: pedagogy and health care and are mostly employed in national and municipal government institutions and enterprises. Various gender segregation manifestations in small

towns are determined by gender and age stereotypes. Women's activity in small towns is often restricted by the attitude of others; for this reason, women in small towns face various barriers hindering their careers, for example, various kinds of control over women due to close relationships, poorly developed infrastructure in small towns, etc. The mentioned research does not provide convincing arguments that women intentionally choose small towns as the environment where to pursue their careers (Bite, 2010).

There are interesting research studies done by K.Caprino (Caprino, 2015), who is a researcher and a work and life coach in the USA, regarding women's professional careers. She writes that women who pursue a successful career for many years, in their mid-life years, feel that their professional life and identity do not satisfy them, i.e. do not function as planned. This research found that the majority of women of women faced at least one of the implicit working and private life crises mentioned by the author, among them chronic health problems, financial dependence and the painful loss of ones' identity. K.Caprino compares a professional crisis to an alarm bell that brings real changes in women's working and private lives. A real professional crisis is more than a problematic period. The majority of women believe that it is a turning point in the particular situation, and it takes time to reassess the situation. K.Caprino mentions a few implicit working and private crises:

- chronic health problems; women do not accept the idea that they have chronic diseases and do not undergo medical treatment sufficiently, saying: "I cannot solve my health problems";
- inability to talk – a woman cannot be an advocate for herself, being afraid of criticism, rejections or punishment;
- financial problems; women stay in a negative situation for a long period because of lack of money;
- inability to use one's own abilities and talents in the job;
- women struggle to balance their life and job;
- women do jobs that they like to do.

A number of authors such as A.Miller, M.Profita and M.Miller have written about career change and advice on how to do it best (Miller, 2015a; Profita, 2015; Miller, 2015b). American scientist Ph.D. E.Ostrow (Ostrow, 2012) is a life and career coach, and at present life and career coaching is a very popular practice in the USA. She practises and studies women's careers and career change. Based on her practical experience and research, she suggests several steps how women can change their career in their mid-life years, for example: listen to your body, pay attention to your intuition and learn to say "no". Speak up! Learn to express yourself when feeling got stuck. Overcome your fears! Be open! Relax! (Overcoming the…, 2015).

Career change for women in their mid-life years differs very much from what it is in their twenties or thirties. In their mid-life years, women tend to think and analyse the time period between their reality in life and their dreams. Women understand and wish their life to be interesting because there will be no second opportunity.

In the breakdown according to levels of education, the greatest number of the registered unemployed has professional education, i.e. 35.2 % of the total number of the registered unemployed. The unemployed with the level of higher education account for 12.2 % of the total number of the unemployed, but women as a social group account for 71 % of the total number of the unemployed with the level of higher education. Only high level of proficiency demanded in the labour market can save a specialist. A genuine professional will never be unemployed (Stalidzane, Dislere, 2012).

The **research aim** is to identify the most important women's skills, personal qualities and the factors that affect women's career change or career choice in case of unemployment.

Methodology

The present research was carried out within the doctoral study programme at Latvia University of Agriculture, Institute of Education and Home Economics. The author started her research by using social networks such as draugiem.lv, facebook.lv, twitter.com, requesting women to fill in questionnaires at the Jelgava, Bauska and Dobele Regional Departments of the State Employment Agency (SEA), at the State Police's Zemgale Regional Department or speaking in person and sending questionnaires to women living both in Latvia and Lithuania via e-mail. A pilot survey was conducted from 30 December

2011 to 6 January 2012, and then 39 women participated in the survey (Rācene, 2013). The present paper summarises the results of a survey done in 2015, in which 1087 women took part. The present research employed a sociological research method – a questionnaire. The statistics method, $\square^2$ test, using the SPSS program and MS Excel, was employed to process the data.

Research specific tasks are:
1. to theoretically discuss women's skills and the factors influencing careers;
2. to analyse the most important women's skills and the factors influencing career change in the view of the respondents.

The survey was conducted from 1 June to 18 August 2015, sending 2000 questionnaires via e-mail to women in Latvia and Lithuania, as well as distributing questionnaires in person. There were received 1087 valid questionnaires back, of which 909 were from women living in Latvia and 178 were from women living in Lithuania. Women were surveyed both via e-mail and via social networks: www.draugiem.lv, twitter.com, facebook.com. The questionnaire was designed using questionnaire matrixes available on the website www.visidati.lv in order that respondents could fill in their questionnaires in an easy and comfortable way. The data were processed employing the grouping method, the descriptive statistics method, MS Excel and SPSS (Paura, Arhipova, 2002). By employing an MS Excel descriptive statistics tool, the statistical indicators of the women who took part in the survey could be identified (Table 1).

Table 1

Age characteristics of the women surveyed

No	Statistical indicator	Sample population (respondent age)
1	Average	42.22
2	Mode	32
3	Median	43
4	Range	55
5	Minimum	19
6	Maximum	74
7	Number of respondents	1087

The Table 1 data revel that women aged 19-74 took part in the survey; the age range was 55 years; the number of respondents was equal to 1087; the mode equaled 32, the median age was 43, and the arithmetic average age was 42.22.

The mode is a type of averages, which appears most often in a set of numbers (Arhipova, Bāliņa, 2003). Most of the women who took part in the survey were aged 32. The median is the middle value of the given numbers or distribution in their ascending or descending orders (Arhipova, Bāliņa, 2000; 2003). The distribution of respondents by education level was as follows: 41.2% had a master's degree, 27.7% a bachelor's degree, 16.8% a higher professional degree, 5.7% a secondary professional degree, 3.4% had an unfinished higher education, 2.9% secondary education, 1.7% a doctor's degree, 0.4% chose the reply option "other" and 0.2% had primary education.

The respondents were asked about their occupation: most, i.e. 25.17% of the respondents represented state administration, 8.84% the administrative area, 8.70% the financial sector and 3.21% were unemployed.

Results and discussion

Results of the survey on women's career change

The respondents were questioned about to what extent they were ready to change their job or occupation and to rate their readiness on a scale within a range from "1" to "5". On the scale, "1" means you are not "currently" ready to change your job and "5" means the change of your job or occupation is

necessary very much. Of the respondents, 41.7% replied that they were not ready to change their job, while 9.8% were determined to do it (Figure 1).
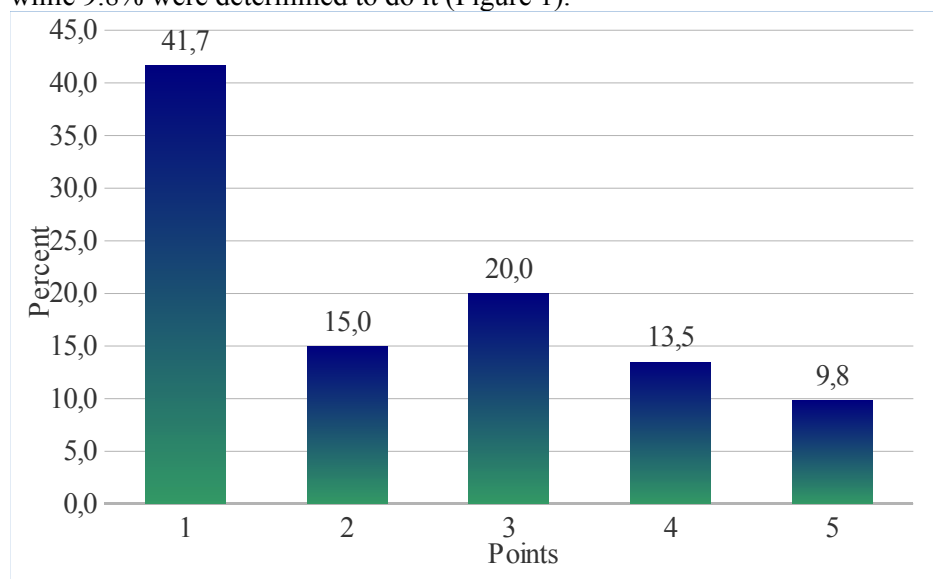

Figure 1. **Respondents' ratings of their preparedness to change their occupations**, *replies expressed* **in percentages, ratings in points**. Data acquired from 1 June 2015 to 18 August 2015 in an anonymous survey of women, n=1087

The respondents were asked about what conditions or events could influence them to make a decision on changing their job or occupation. The conditions or events mentioned in the questionnaires were as follows: a higher wage; mutual relations in the working team; an absolute dislike of the job; an interesting job offer; a significant decrease in the wage; a job closer to the place of residence; dismissal from the job; change of the place of residence; a psychologically unfavourable environment; getting a new profession; a microclimate in the working team; unemployment; career opportunities; a better and more interesting job; family conditions; sudden changes in the job duties; working hours that are incompatible with the child's upbringing and the kindergarten's working hours; frustration with the current employer (if the employer abused one's work or its fruits); greater social guarantees; war; routine; flexible working hours; emotional burnout; and mobbing at work.

Factors influencing women's careers

Career choice factors considerably influence women's careers (Karjeras attīstības…, 2008):

- *parents' intentions concerning their children in childhood*. Children who were in the focus of family attention and persistently enjoyed care, love and respect, when becoming adults, might desire the satisfaction of such needs. In the future, they will be very sensitive to the attention of others and to positive attitudes. Consequently, they are attracted by the professions enabling them to contact others and enjoy their respect. Such individuals prefer a job that can help others while doing it or a profession related to culture, perhaps, art or entertainment;
- *necessity to realise one's abilities*, i.e. to achieve self-actualisation. Individuals do what, in their opinion, gives the greatest satisfaction and promote their personal growth;
- *interest in the profession*. The source of interest is literature, movie heroes as well as successful and interesting television shows. If individuals are not prepared and inappropriate for their dream jobs, such jobs might become a burden and usually lead to the change of the profession;
- *prestige*. A profession is chosen depending on the understanding of its prestige in society;
- *the gender role factor*. For example, women rarely choose a scientist's career, being doubtful about their ability in science. Women prefer professions that allow them to dedicate more time to their family (part-time employment, less efforts and lower time consumption, but in this way their career growth opportunities are limited and lower wages are earned) or traditional "women's professions" such as pedagogy or health care;

- *orientation towards the social values established in society*, which reflects the choice of the profession path;
- *necessity for security and protection.* Preferring a secure job providing stable incomes, a good education and investment in it may be viewed as an action and even as motivated searches for personal security;
- *psychosomatic diseases* that developed as a result of such a situation might be serious and even dangerous for one's life, particularly if the threat of family breakdown adds to the destruction of personal identity for individuals in this period.

To identify the most essential factors in women's choice of a profession from the perspective of respondents, a question on factors influencing successful careers was included in the survey. The respondents were asked to rank the given factors by importance. There were five reply options beginning with "1" – no influence through to "5" meaning great influence. The reply option "great influence" was selected for analysis. It is necessary to examine the distribution of respondent replies and identify whether the replies match with the theoretical distribution of observations (Table 2).

Table 2

Factors influencing women's successful careers

Data acquired from 1 June 2015 to 18 August 2015 in an anonymous survey of women, n=1087.

No	Factors	Observed N	Expected N	Residual
1.	Age	297	268.3	28.7
2.	Gender	94	268.3	-174.3
3.	Family status (married, unmarried)	111	268.3	-157.3
4.	Experience of family (parent's experience in their profession)	82	268.3	-186.3
5.	Children (yes, no, number)	215	268.3	-53.3
6.	**Education level**	**558**	**268.3**	**289.7**
7.	Place of residence	259	268.3	-9.3
8.	Financial situation	198	268.3	-70.3
9.	Number of jobs in your place of residence	**443**	**268.3**	**174.7**
10.	Physical capacities	152	268.3	-116.3
11.	Lifestyle	161	268.3	-107.3
12.	**Attitude of your supervisors**	**438**	**268.3**	**169.7**
13.	**Psychological climate**	**439**	**268.3**	**170.7**
14.	Distance from home to the workplace	236	268.3	-32.3
15.	**Partner support**	**341**	**268.3**	**72.7**
Test Statistics				
				Factors
Chi-Square				1126.770
df				14
Asymp. Sig.				0.000

Conclusion: Since the p-value = 0.000 < 0.05, one can conclude with a 95% probability that the distribution of respondent replies is quite uneven (Paura, Arhipova, 2002). Based on a $\square^2$ test, one can observe a significant prevalence of the number of replies for Factor 6 "Education level". This means that most of the women surveyed mentioned the education level as the most important factor. The number of jobs in the place of residence was ranked second, the psychological climate was ranked third, the attitude of supervisors was ranked fourth and partner support held fifth position.

According to the respondents, the following factors also influence women's successful career development: the wish to achieve some goal; prejudice; a coincidence of circumstances; influential acquaintances; personal traits; career opportunities at the job; the woman's own wishes; nationality; religious beliefs; competition in the labour market; public opinion; ability to represent oneself in the

right way; attitude to one's own growth; wage size; competence, positivism, external appearance; internal feeling, a psychological state; confidence in oneself as a strong or a weak individual; interest in a particular field and readiness to raise one's qualification; ability to plan and organise one's work and life on the whole; a sense of responsibility and the skill to independently make decisions.

Table 3

Importance of personal qualities

Data acquired from 1 June 2015 to 18 August 2015 in an anonymous survey of women, n=1087.

No	Personal qualities	Observed N	Expected N	Residual
1	Wish to help others	131	407.7	-276.7
2	Patience	376	407.7	-31.7
3	**Enterprise**	**726**	**407.7**	**318.3**
4	Sensitivity	153	407.7	-254.7
5	Persistence	677	407.7	269.3
6	Purposefulness	728	407.7	320.3
7	Ability to keep secrets	305	407.7	-102.7
8	**Ability to cope with stress**	**621**	**407.7**	**213.3**
9	Thirst for knowledge	337	407.7	-70.7
10	Reliability	507	407.7	99.3
11	Sincerity	130	407.7	-277.7
12	Skilfulness	435	407.7	27.3
13	Empathy	175	407.7	-232.7
14	Talkativeness	181	407.7	-226.7
15	Ability to control oneself	512	407.7	104.3
16	Determination	570	407.7	162.3
17	Creativity	415	407.7	7.3
18	Self-confidence	566	407.7	158.3
19	**Logical thinking**	**619**	**407.7**	**211.3**
20	Diligence	435	407.7	27.3
21	Loyalty	394	407.7	-13.7
22	Sense of duty	533	407.7	125.3
23	Courageousness	404	407.7	-3.7
24	Tactfulness	375	407.7	-32.7
25	Tolerance	209	407.7	-198.7
26	Accuracy	335	407.7	-72.7
27	Honesty	408	407.7	0.3
28	Politeness	323	407.7	-84.7
29	Sense of humour	195	407.7	-212.7
30	Good observation ability	352	407.7	-55.7
31	Order and tidiness	277	407.7	-130.7
32	Insistence	528	407.7	120.3
33	Discipline	522	407.7	114.3
Test Statistics				
				Qualities
Chi-Square				2312.445
df				32
Asymp. Sig.				0.000

The diversity of professions is very broad. To choose an appropriate and desirable profession, first of all, it is necessary to examine oneself – what personal qualities are possessed and what qualities have to

be built up – as well as the description of the desired profession and to identify whether the profession match with the wishes. Accordingly, the author included in her survey a question about personal qualities. The respondents were asked to indicate which of the given personal qualities influenced women's successful career development. There were five reply options beginning with "1" – no influence through to "5" – great influence. The reply option "great influence" was selected for analysis. It is necessary to examine the distribution of respondent replies and identify whether the replies match with the theoretical distribution of observations (Table 3).

Conclusion: Since the p-value = 0.000 < 0.05, one can conclude with a 95% probability that the distribution of respondent replies is quite uneven. Based on a $\square^2$ test, one can observe a significant prevalence of the number of replies for Quality 6 "Purposefulness" and Quality 3 "Enterprise". It means that most of the women surveyed mentioned purposefulness as the most important personal quality, followed by enterprise in second position, persistence in third position, ability to cope with stress in fourth position and logical thinking in fifth position.

Skills contributing to women's career development

The Lifelong Education Memorandum defines six key ideas, the implementation of which would contribute to women's career development and competitiveness. One of the ideas puts focus on acquiring new basic skills. By acquiring new basic skills, women can increase their employment opportunities, as economic and social changes transform and raise the standards for the description of basic skills that are minimally needed to actively participate in the working, family and public lives. New basic skills, which are mentioned in the Lisbon Strategy, represent skills in information and communication technologies (ICT), foreign languages, technological culture and business as well as social skills (A Memorandum on Lifelong…, 2000).

A skill is an ability to perform some activity according to the required quality and quantity; it is a prerequisite for completing the activity. It involves a degree of knowledge and techniques that allows employing what was acquired for purposeful activities. Individuals develop part of their skills through naturally getting experience (e.g. the skill to walk), while other skills are acquired by practising by oneself or under the guidance of a professional (e.g. computer skills). The skill is developed through versatile and repeated practices and may be perfected endlessly. General skills meeting social and economic needs in Latvia are classified as follows (Mikuda, 2004):

- social skills (to cooperate with other individuals, to tackle problem situations, to listen to other individuals, to convince others about one's opinion, to use body language and the language of gestures, etc.);
- organisational and management skills (to assume responsibility, to execute the work task precisely, to organise one's own work, to find a solution to a problem, to act in changing situations, to make decisions independently, to lead other individuals and to develop one's own career purposefully);
- computer skills (to use a computer for processing texts and numerical data and for information searches and communication);
- foreign languages skills (Latvian, English, German and other languages).

To identify the respondents' opinions on the skills needed for a successful career, they were asked to indicate which of the given personal qualities influenced women's successful career development. There were five reply options beginning with "1" – no influence through to "5" meaning great influence. The reply option "great influence" was selected for analysis. It is necessary to examine the distribution of respondent replies and identify whether the replies match with the theoretical distribution of observations (Table 4).

Table 4

Woman's rankings of the most important skills needed for the successful development of women's careers

Data acquired from 1 June 2015 to 18 August 2015 in an anonymous survey of women, n=1087

No	Skills	Observed N	Expected N	Residual
1	**Cooperate with other individuals**	**631**	**536.7**	**94.3**
2	**Tackle problematic situations**	**644**	**536.7**	**107.3**
3	Listen to other individuals	420	536.7	-116.7
4	Convince others about my opinion	470	536.7	-66.7
5	Use body language and the language of gestures	150	536.7	-386.7
6	Assume responsibility	599	536.7	62.3
7	Execute the work task precisely	583	536.7	46.3
8	**Organise one's own work**	**702**	**536.7**	**165.3**
9	Find a solution to a problem	635	536.7	98.3
10	Act in changing situations	524	536.7	-12.7
11	**Make decisions independently**	**646**	**536.7**	**109.3**
12	Lead other individuals	468	536.7	-68.7
13	Develop one's own career purposefully	509	536.7	-27.7
14	Use a computer for work with texts	509	536.7	-27.7
15	Use a computer for work with numerical information	464	536.7	-72.7
16	Use a computer for information search	540	536.7	3.3
17	Use a computer for communication	437	536.7	-99.7
18	Knowledge of foreign languages	550	536.7	13.3
19	Presentation skills	553	536.7	16.3
20	Basic skills in management	565	536.7	28.3
21	Leadership	520	536.7	-16.7
22	**Ability to work in a team**	**689**	**536.7**	**152.3**
Test Statistics				
				Skills
Chi-Square				539.079
df				21
Asymp. Sig.				0.000

Conclusions of the research are: since the p-value = 0.000 < 0.05, one can conclude with a 95% probability that the distribution of respondent replies is quite uneven. Based on a χ^2 test, one can observe a significant prevalence of the number of replies for Skill 8 "Organise one's own work" and Skill 22 "Ability to work in a team". It means that most of the women surveyed mentioned the skill to organise their own work as their most important skill, followed by ability to work in a team in second position, making decisions independently in third position, tackling problematic situations in fourth position and cooperating with other individuals in fifth position.

According to the respondents, the following skills also influence women's successful career development: the skill to manipulate people; the skill to influence men's opinion; the skill to write grammatically correctly and without orthographic mistakes; the skill to keep a conversation; the skill to see things in context; the skill to cooperate with like-minded individuals; the skill to be dressed tastefully, in an appropriate manner; the skill to keep an interesting conversation about out-of-office topics in an informal atmosphere (parties, coffee breaks at meetings, etc.); the skill to control oneself in

various situations; the skill to respect the team's interests; the skill to combine the family life and the job; the skill to drive a car; the skill to be silent when your opinion is not needed; the skill to balance the working and the family lives; the skill to separate paid employment from private life work; the skill to make contacts fast, "to network"; the skill to impose one's views, etc.

Conclusions
- Women's career affects the essential theoretical factors of professional choice – parent's setting in childhood period, the need to fulfill their potential, it means to achieve self-actualization, interest in the profession, factor of gender roles, orientation to the social value system what is established by society that reflects to the conscious way of professional choice, the need for security and defenseas well as psychosomatic illnesses which developed in case of unemployment.
- According to the empirical research study, the respondents acknowledged the education level as the most important factor influencing career development. The number of jobs in the place of residence was ranked second, the psychological climate was ranked third, the attitude of supervisors was ranked fourth and partner support held fifth position.
- The women surveyed mentioned purposefulness as the most significant personal quality, followed by enterprise in second position, persistence in third position, ability to cope with stress in fourth position and logical thinking in fifth position.
- The women surveyed acknowledged the skill to organise their own work as their most constructive skill, followed by ability to work in a team in second position, making decisions independently in third position, tackling problematic situations in fourth position and cooperating with other individuals in fifth position.

Recommendations
- The author recommends that career counsellors as well as personnel selection professionals familiarise themselves with the research findings to be used in their daily work.
- The author recommends that education institutions and centres consider the research findings in designing their study programmes in order that learners build up the most important skills needed to make a successful career.
- Employers are advised to get familiarised with the factors, thereby seeking to enhance the working environment for their potential employees as well as to develop a bonus system in order that employees feel comfortable and appreciated at their job.

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The Model of Career Crisis Management for Women as a Means of Career Development in Relation to Lifelong Education

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Abstract: The paper focuses on the model of career crisis management for women, which was developed by the author. The research aims to evaluate the author's model of career crisis management as a means for career development in relation to lifelong education activities, which are carried out during contact hours, in the e-environment and as individual assignments. A repeated expert evaluation was performed to achieve the aim. The expert evaluation concluded that if using the model of career crisis management as a scientifically justified inference (observing the principle of gender conformity) and as a set of prerequisites (education content, kinds of counselling, various methods of counselling), it was possible to encourage women being in a career crisis situation to develop various skills (career management, decision-making, communication, computer skills, skills to adapt to new conditions etc.), thereby providing professional counselling for their career support through informing, educating and advising them by employing progressive methods (e-counselling, e-mentorism).

Keywords: women's career development, career support model, professional crisis management, lifelong education.

Introduction

Lifelong education means acquiring education and knowledge throughout the entire lifetime regardless of age and education or social status. It also influences the mental development of individuals, giving an opportunity to develop themselves and be knowledgeable in a particular field as well as to raise self-confidence, which leads to positive results when competing with others. However, not everyone who wishes to learn is given such an opportunity because acquiring education throughout the entire lifetime is influenced by the financial situation of the individual, the lack of information as well as technological resources.

The *Europe 2020* strategy sets the following priorities: smart growth, an economy based on knowledge and innovation, sustainable growth based on efficient uses of resources and inclusive growth based on a high employment rate. It also envisages reducing the number of individuals subject to the risk of poverty, which currently total 20 million, until 2020. This is a large number of people needing assistance in their career development. In Europe, 63% of women are employed, compared with 76% of men (Communication from the Commission..., 2010, 12).

In recent years, adult lifelong education has become urgent in Latvia, which is related to the situation with unemployment. As of 29 February 2016, there were 86581 registered unemployed individuals in Latvia, of which 44443 were women who needed assistance in their career development, which would involve both counselling and an educational programme (Maskaļovs, 2015; Women and men..., 2013, 22).

The successor of the Lisbon strategy – the Europe 2020 strategy – stresses the need to promote the integration of individuals into the labour market, the recognition of non-formal education and daily learning and the improvement of learning outcomes, to increase the topicality and openness of the education system as well as to build competences in residents, which are necessary for their further education throughout the entire lifetime (ES 2020 Stratēģija Lisabonas..., 2014; Mūžilga karjeras atbalsta politika..., 2011; Mūžilgs karjeras..., 2011).

D.Liegeniece (2002), based on the ideas suggested by M.Knowles (Knowles, 1988), concludes that adults get ready to learn when they feel the need to know how to do something in order to effectively change some aspect of their life. Besides, M.Knowles (Knowles, 1988) believes that it is not a good idea to wait until this readiness develops by itself and points that the readiness of adults to learn is associated with the following factors:

- understanding of what they need to know;
- focus on real problems rather than study courses;
- internal motivation to learn.

Lifelong education provides a positive result if individuals can use their acquired knowledge in their job and social life, thus raising their self-confidence and worthiness in society. Knowledge acquired influences the development of individuals throughout their entire lifetime.

Lifelong education means not only caring about one's own education and development but also contributing to the development of the whole national economy. As mentioned in the Lifelong Learning Memorandum, successful transition to an economy and a society that are based on knowledge requires transition to lifelong education (Mūžizglītības memorands, 2000; Latvijas Nacionālais, 2012). However, the change of a profession or a job is influenced not only by an economic crisis but also by individuals' own wish to change themselves or to acquire something new and to perfect their knowledge.

In Latvia, opportunities to acquire and perfect one's knowledge throughout the entire lifetime are provided by the government, local authorities and the private sector, and the opportunities are expanded and improved from year to year. Adults may continue or start learning at various educational institutions and in various ways (Mūžizglītība Tavai..., 2008; Mūžizglītības aktuālās…, 2008).

Women's career development, using lifelong education opportunities, and professional crises are currently very urgent problems. In professional crisis situations, women urgently need to refresh their knowledge, skills and competences in order to retain their professionalism and to fully participate in social events and their personal growth and career development. Also, women's successful integration into the labour market contributes to the development of the entire national economy. The problem is that women, getting into professional crisis situations, face difficulties to change their job as well the risk of depression increases. The author's research done over several years justifies the necessity for assistance in overcoming a career crisis, which is offered by the author in her model of career crisis management that includes an online lifelong learning programme.

The research aim is to evaluate the author's model of career crisis management as a means for career development in relation to lifelong education.

Methodology

A repeated expert evaluation of the model of career crisis management for women was performed in January 2016 to achieve the aim. The model was enhanced based on the experts' recommendations. The first variant of the model was developed and its expert evaluation was done in May 2015, and it was published in the *British Journal of Education, Society & Behavioural Science* (Racene, Dislere, 2016). That research was carried out within the doctoral study programme at Latvia University of Agriculture, Institute of Education and Home Economics. All the experts involved in the research were selected among professionals who lived and worked in Latvia and had a length of service of more than 10 years. The four experts had experience in pedagogy and career counselling. They based their opinions on the importance of the model of career crisis management in career development in relation to lifelong education on their pedagogical and career counselling experience. The author developed a questionnaire and sent it together with a theoretical description of the model to the experts for evaluation. Kendall's W was employed to identify concordance among the experts. Before it, the model was approbated and a client developing lifelong education programme was tested on a group of 18 individuals – unemployed women registered with the State Employment Agency in 2015. The programme was developed and is available online in the Moodle environment (Racene, 2016).

The research aim is to evaluate the author's model of career crisis management as a means for career development in relation to lifelong education. Specific research tasks:
1. To activate discussion about the author's model of career crisis management for women as a means for career development in relation to lifelong education.
2. To perform an expert evaluation of the author's model of career crisis management.

Legal acts and other information sources were used to perform the tasks and achieve the aim. The present research employed statistical analysis methods: descriptive statistics in MS Excel and expert evaluation in SPSS.

Results and discussion

Necessity of lifelong learning in career development

In theory, lifelong learning is viewed as a unified system, and it continues throughout the entire lifetime. Individual motivation to learn and various education opportunities are the key factors for successfully implementing lifelong learning. The Lifelong Learning Memorandum calls for considerably increasing the demand for education as well as the range of opportunities for education, particularly with regard to those who least benefited from education and learning. This means that education and learning systems have to be adapted to individual needs in relation to labour market requirements. There are three basic types of purposeful learning (Table 1)

Table 1

Basic types of purposeful learning (Lifelong Learning Memorandum, 2000)

Formal learning	Informal learning	
It takes place at educational and training institutions, leading to recognised diplomas and qualifications.	Non-formal learning takes place along with formal educational and training systems, leading to no official certificates and diplomas; instead, certificates are granted that confirm the completion of a course. Non-formal learning may take place at the job or it can be provided by civil society organisations and groups. Non-formal learning opportunities may be also given by organisations and services that have been established to complement formal systems.	Informal learning is a natural addition of daily life. Daily informal learning is not always purposeful and, therefore, sometimes people do not perceive it as perfecting their knowledge and skills.

Non-formal learning plays an increasing role in the continuous process of lifelong education. Non-formal learning takes place outside schools, colleges and universities. Informal learning is usually not taken into consideration at all, although it is the oldest form of education and is the key form of learning in early childhood and, nowadays, throughout the entire lifetime.

American scientist M.Knowles, researching informal learning, finds that the best way how to organise informal learning is to employ the group and forum approaches. It is because there are significant differences between the interests in organised classes and the interests in lecture, forum and club programmes. The former are likely to be stable, long-term interests, while the latter are more transitory. Forums and club programmes are more flexible than organised classes. In a programme series the topics can range from pure entertainment to serious lectures, while an organised class is necessarily limited to a single subject-matter area. The lecture, forum, and club types of programmes generally require less commitment of time, money and energy from participants than do organised classes. As a result they are likely to attract people with somewhat less intense interest, thus gradually involving the people in lifelong education programmes and arousing their motivation to learn in order to contribute to their career growth (Knowles, 1988; Smith, 2002).

The author concludes that women's development takes place owing to lifelong education, and lifelong education is an opportunity to educate and employ oneself, to expand one's views, to be among the public and be satisfied with oneself and, finally, to find a job appropriate for one's education and skills or to start self-employment. Lifelong education involves learning throughout the entire lifetime. It is based on the necessity caused by the internal need or an exogenous factor (most often, it is the work environment) to acquire and perfect one's knowledge and skills. Nowadays, in the era of fast scientific and technological progress and high technologies, knowledge and skills acquired through formal learning get obsolete very fast. Lifelong education together with a specifically organised system of both formal and non-formal further learning contributes to the comprehensive development of personalities

and allows them to adapt to the new era and social changes and, if persistently raising their qualification or even undergoing retraining, not to lose their jobs or to timely change the jobs. In a purposefully planned further education system, lifelong education gives an opportunity to implement the principle of "learning throughout the entire lifetime" (Mūžu dzīvo, mūžu mācies, 2015). One of the components of lifelong education is adult education. Adult education is defined as a multiform educational process focusing on adults and providing the development of individuals and their competitiveness in the labour market throughout the lifetime (Izglītības likums, 1998). The forms of adult education are as follows: distance learning, various courses, seminars, online studies, use of the web etc. Nowadays, it is expected from adult education to increase the feeling of worthiness in all the participants after completing a course, and it could serve as the basis for the individuals to successfully integrate into the labour market. Acquiring new skills through lifelong education programmes can help create an individuality of another kind that is able to cope with a crisis and to engage in the professional and social life.

The European project AE-PRO, developed by the European Adult Education Association (EAEA), offers e-learning for educators of adults regarding adult education management and best practice examples in European countries. The objectives of the project, which started in 2015 and offers online studies free of charge in European countries, are as follows (AEpro, 2015):

- to raise the level of knowledge of employees about adult education in Europe;
- to implement the exchange of innovations through intergenerational learning;
- to provide an opportunity to learn from experts and peers;
- to give educators of adults an opportunity for professional development using Erasmus+ mobility grants.

The author appreciates activities initiated by Europe that are aimed at the professional development of educators of adults and borrows ideas for perfecting her *Client Developing Programme for career change for women being in professional crisis situations*. A number of scientists have worked on various aspects of women's career development, for example, J.Bimrose did an investigation into why the work done by women and men is differently evaluated by the public and analysed the ways how women can successfully integrate into the labour market (Bimrose, 2008); C.Chen worked a lot on the specifics of counselling women to help the women effectively combine their job and family responsibilities (Chen, 2008); D. Zytowski (Zytowski, 1969/2011) examined career development with regard to the role and responsibilities of a mother in a household; L.Belanger researched the ways how women can be successful if engaging in business (Belanger, 2015).

To provide career support to women being in professional crisis situations, the author developed the model of career crisis management as a means for career development in relation to lifelong education.

Characteristics of the Model of Career Crisis Management for Women

The model in career counselling specifies and allows forecasting expected outcomes from career support. Therefore, it is important to integrate such a model into career counselling, including career education, career support and career research, to achieve a result.

To provide assistance to women being in professional crisis situations, the author developed the **Model of Career Crisis Management** (Figure 1).

The **target audience** are women who wish or are forced to change their occupation and who are in a professional crisis situation.

The **purpose of the model** is to examine the situation in a client's career development, to determine the key ways of starting the career change, to identify the client's skills and wishes, to assess the feasibility of the client's future profession and to offer career counselling and an educational programme in order to overcome the professional crisis.
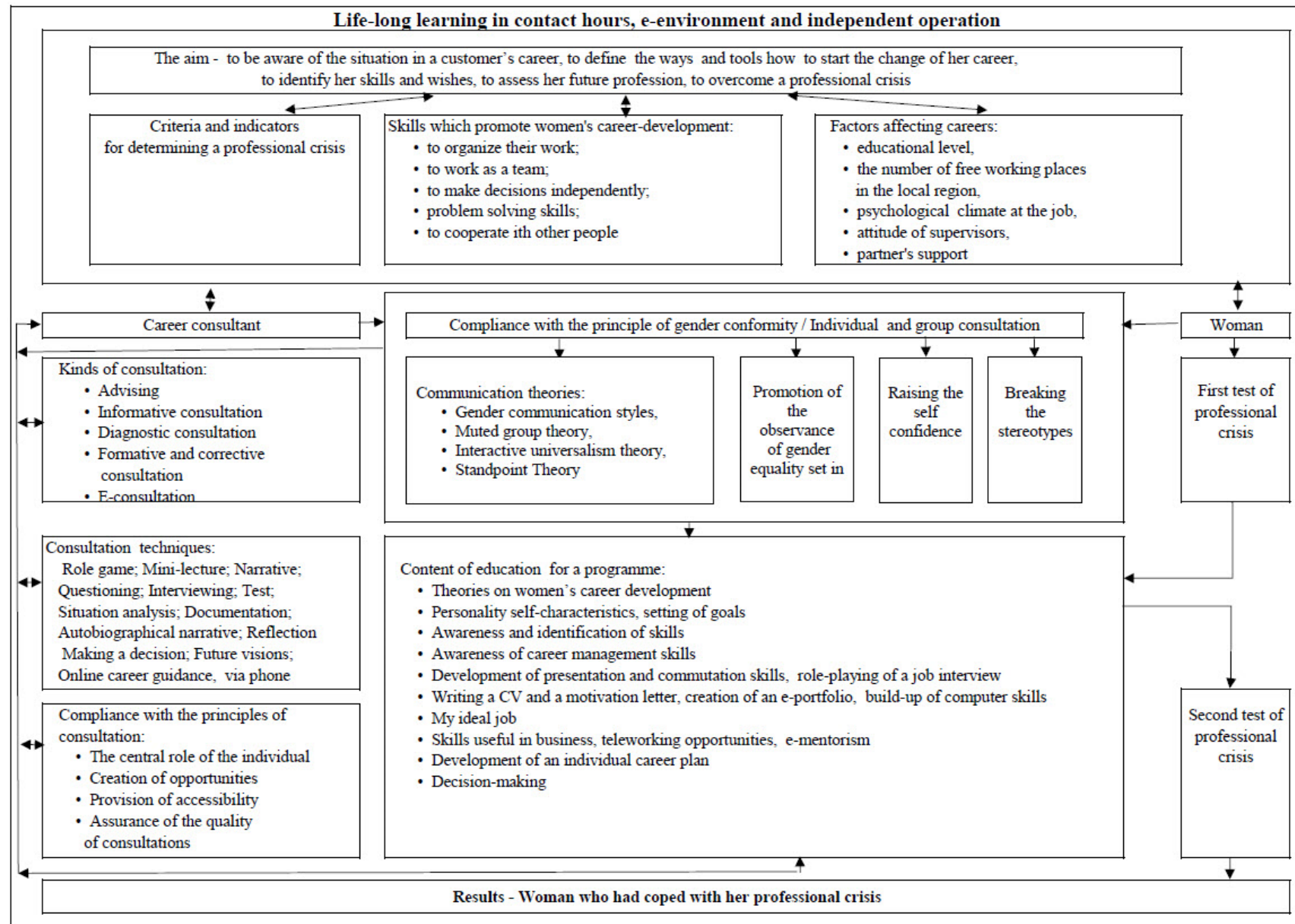
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Life-long learning in contact hours, e-environment and independent operation

The aim - to be aware of the situation in a customer's career, to define the ways and tools how to start the change of her career, to identify her skills and wishes, to assess her future profession, to overcome a professional crisis

Criteria and indicators for determining a professional crisis

Skills which promote women's career-development:
- to organize their work;
- to work as a team;
- to make decisions independently;
- problem solving skills;
- to cooperate ith other people

Factors affecting careers:
- educational level,
- the number of free working places in the local region,
- psychological climate at the job,
- attitude of supervisors,
- partner's support

Career consultant

Compliance with the principle of gender conformity / Individual and group consultation

Woman

Kinds of consultation:
- Advising
- Informative consultation
- Diagnostic consultation
- Formative and corrective consultation
- E-consultation

Communication theories:
- Gender communication styles,
- Muted group theory,
- Interactive universalism theory,
- Standpoint Theory

Promotion of the observance of gender equality set in

Raising the self confidence

Breaking the stereotypes

First test of professional crisis

Consultation techniques:
Role game; Mini-lecture; Narrative; Questioning; Interviewing; Test; Situation analysis; Documentation; Autobiographical narrative; Reflection Making a decision; Future visions; Online career guidance, via phone

Content of education for a programme:
- Theories on women's career development
- Personality self-characteristics, setting of goals
- Awareness and identification of skills
- Awareness of career management skills
- Development of presentation and commutation skills, role-playing of a job interview
- Writing a CV and a motivation letter, creation of an e-portfolio, build-up of computer skills
- My ideal job
- Skills useful in business, teleworking opportunities, e-mentorism
- Development of an individual career plan
- Decision-making

Compliance with the principles of consultation:
- The central role of the individual
- Creation of opportunities
- Provision of accessibility
- Assurance of the quality of consultations

Second test of professional crisis

Results - Woman who had coped with her professional crisis

Figure1. Model of career crisis management for women [author' construction].

The model's client developing programme intends to give every client an opportunity to engage in personalised e-learning activities that match their learning needs. The author employed Moodle – the globally popular course management system –, which offers to learn the author's client developing programme for career change for women being in professional crisis situations. The website also provides the methodology suggested by the author (Racene, 2016). A pedagogical experiment was also done in the e-environment to approbate the model in social networks on the Internet.

The model identifies **factors influencing a career** (educational level, the number of working places in the local region, psychological climate at the job, attitude of supervisors, partner' support, etc.), defines a professional crisis as well as develops and approbates criteria and indicators for dealing with the professional crisis.

A career counsellor and a woman or women being in a professional crisis situation participate in a career counselling session and use the model.

The kind of counselling (advising, informative, diagnostic, corrective, formative or e-counselling) is chosen depending on the client's wishes or the content of the career counselling.

In developing the model, the author used communication theories focusing on communication with women to contribute to career support to women being in a professional crisis situation. Nowadays, issues related to differences in perception and communication between women and men are very topical. Women's self-confidence is often associated with their body size, leanness and corpulence, sexual attractiveness, colour of hair and skin and virginity (Stevenson-Moessner, 2000).

While researching a career with regard to the principle of gender conformity (Racene, 2015), the author found that it was very well reflected in communication theories. These theories explain and help cope with unreasonable misconceptions concerning the role and functions of genders.

The theory on gender communication styles (Tannen, 1990/2007; Tannen, 1992a; Tannen 1992b) stresses that particularly communication differences are those leading to misunderstandings and confusions. Communication between women and men is characterised by different communication norms and different language usage principles, and these differences can obstruct their understanding.

Muted Group Theory (Muted Group Theory, 2015; Kramarae, 1996a; Kramarae 1996b; Ardener, Ardener, 2005) 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. According to this theory, it is difficult for some members of society to integrate into a successful society because men act more differently than women; silence involves a lower status in society.

Interactive Universalism Theory (Benhabib, 1992) proposes new communicative ethics based on the concept of universal interaction among all individuals. S.Benhabib aims to extend norms, so that they can fit everyone. Communicative ethics means that everyone is responsible for the voices not being heard and to understand muted voices.

Standpoint Theory (Harding, Wood, 2014) explains that individuals are located in various places and exist in different times, different standpoints exist and therefore future perspectives differ. According to the theory, different standpoints are due to different genders, races and sexual orientations and, accordingly, there are different development prospects for every group (Racene, Dislere, 2016).

Social cognitive theory assigns the key role to processes based on cognition, (human) replacement, self-regulation and own thoughts (when individuals think and decide something themselves) to ensure the adaptation of individuals, and changes (i.e. human actions) are inconsistent with the conceptions of human functioning that assign a too important role to environmental or biological factors. The theory gives direct recommendations to make intervention (Lent, 2013; Hackett, Lent, 2008; Lent, Lopez, Lopez, 2008), in the result of which individuals are motivated to make corrective changes in their lifeThe model takes into account the following **principles of counselling** (Visu mūžu pieejama konsultēšana..., 2005):

1) **central role of individuals** *(independence, objectivity, confidentiality, equal opportunities, the comprehensive approach)*;

2) creation of **opportunities** (giving opportunities, active participation);
3) **improvement of availability** (transparency, friendliness and empathy, continuity, usability, accessibility, adaptation);
4) **quality of counselling** (appropriate methods of counselling, persistent enhancement, rights to handle and enforce complaints, competent personnel).

The **purpose** of the **Client Developing Programme**, which is included in the model and is offered as a lifelong learning programme, is to examine the situation in a client's career development, to determine the key ways of starting the career change, to identify the client's skills and wishes, to assess the feasibility of the client's future profession – both the demand for the profession in the labour market and the client's competitiveness –, to advise the client how to start seeking for a job and how to prepare for the job and to contribute to the development of socially active and educated personalities that are able to fully and actively integrate and live in the modern society.

The *Client Developing Programme* for career change for women in professional crisis situations is intended to help women who need advice and assistance in a crisis situation and to provide necessary information, to promote their thinking and encourage them to analyse their surrounding environment and their situation, and to raise their self-confidence and to contribute to their professional success. The programme involves 10 individual online classes to get familiarised with the client and her problems and to perform various assignments and tests until, working together, a decision is made.
The programme involves a methodology regarding how to make decisions, identify problems in one's life and to choose appropriate solutions to how to present one's ideas and make others focus on them as well as to provide an opportunity to everyone to use personalised e-learning activities, developed in the Moodle environment, that match their training needs (Racene, 2016).

The main **career counselling techniques** employed by the programme.

Role game. It is a reality simulation technique for playing a role that does not make any consequence in reality through offering "players" an opportunity to perform certain actions or practise certain behaviours and/or abilities. (Karjeras konsultēšanas metodes, 2009). Situation analysis. Usually real situations that can be associated with clients' experiences are used for an analysis. The most usual scheme for a situation analysis is as follows: identification – formulation – assessment – solution – decision-making. Mini-lecture. It involves giving information briefly. Narrative. It focuses on priorities, choices, self-exploration etc. Questioning. This is a technique for acquiring information and communicating with a client. Interviewing. To choose a profession, interviews are performed with the purpose to identify a client's professional goals, interests, prospects and abilities as well as to help the client plan the career, to encourage the client to make decisions in the professional self-determination process. Autobiographical narrative. It helps to better understand whether clients appreciate their life experience and how they develop their identity. Test. It is a systemised procedure for comparing the behaviours of two or more individuals. Documentation. A counsellor needs a book for registering clients and has to make a client file in which all materials that are acquired during counselling are collected (Karjeras attīstības atbalsts, 2008). Decision-making helps summarise and analyse information, make choices and implement them (Karjeras konsultēšanas metodes, 2009). Feedback (reflection) allows participants to express their opinions, observations and feelings about what happens as well as helps the pedagogue assess any training stage (Rubana, 2004). Future visions assist in planning carer growth and in setting goals (Karjeras izglītība skolā, 2009). E-guidance involves career support activities and services, using all forms of ICT: online career e-guidance, a phone and the Internet (Racene, Dislere, 2016).

In the result, after the content of education in the author's *Client Developing Programme* has been learned by a client, the client's professional crisis is repeatedly tested. Implementing the model, women can overcome their professional crisis owing to learning the programme and career counselling.
The result of applying the author's model of career crisis management for women and online *Client Developing Programme* is women who have overcome a professional crisis.

Expert evaluation of the model of career crisis management for women

The **model of career crisis management for women** was evaluated by experts. The experts were asked if they agreed and could do an expert evaluation. All the four experts had a length of service of more than 10 years. All of them had experience in pedagogy and career counselling. They based their opinions on the importance of the model of career crisis management in career development on their pedagogical and career counselling experience. Kendall's W is employed to identify correlation among several variables. It is often known as Kendall's nonparametric coefficient of concordance. The coefficient is calculated for a variable that has been evaluated by various experts (Paura, Arhipova, 2002). The expert ratings on a scale from 1 meaning inappropriate to 5 meaning appropriate served as input data for calculating Kendall's W. The expert evaluation results for the model of career crisis management are shown in Table 2.

Processing experts' evaluations with SPSS program and getting results Kendall W = 0.793; p= 0.007 that indicates a fair significant degree of agreement. Three rating groups of experts' opinions may be identified. The highest ratings – first place – were given to an assertion that the methodology provided by the model was appropriate and sufficient to contribute to overcoming a professional crisis, the author's principle of gender conformity (Racene, 2015) included all the necessary dimensions and the author's model helped women cope with a professional crisis. Second place was given to an assertion that the methods used were appropriate for career counselling and the client developing programme for career change for women being in a professional crisis situation was suitable. An assertion that the content of education in the client developing programme promoted the change of careers for women was placed in third position. Such a model of career crisis management is useful to practitioners – career counsellors, who could use it to plan and provide career support to women being in professional crisis situations.

Conclusions

1. Lifelong education is an opportunity to educate and employ oneself, to expand one's views, to be among the public and be satisfied with oneself and, finally, to find a job appropriate for one's education and skills or to start self-employment. The author's Client Developing Programme was developed in the e-environment as a lifelong learning programme.

2. Employing the model of career crisis management as a scientifically justified inference (observing the principle of gender conformity and counselling principles) and as a set of prerequisites (education content, kinds of counselling, various methods of counselling, a repeated test of a professional crisis), it is possible to provide women being in a career crisis situation with professional counselling for their career support through informing, educating and advising them by employing progressive methods (e-counselling, e-mentorism).

3. The expert evaluation revealed that the experts' opinions were quite unanimous, and the highest ratings were given to an assertion that the methodology provided by the model was appropriate and sufficient to contribute to overcoming a professional crisis.

4. According to expert opinion it can be concluded that women being in a career crisis situation learning the author's online programme in career education what was developed as a lifelong learning programme and receiving professional counselling can enhance their career development and can cope with their professional crises.

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The New Challenge for Higher Education Institutions of Latvia: Directing Students' Professional Career Development

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Abstract: Intensified competition between higher education institutions in terms of increasing enrolment rates and retaining students makes education managers reconsider their strategy aimed at identifying the elements and indicators of competitive advantage. In that regard, greater emphasis should be placed on providing university graduates with the necessary tools to successfully launch and manage their professional career. The aim of this paper is to initiate a discussion about the role of career guidance and counselling services in the higher education institutions of Latvia. The paper also reports the results of students' essays content analysis giving their opinion on the actions to be taken by education managers to prepare students to be ready to perform in a multicultural environment and develop their professional career both in the local and international labor market. In the paper, it is argued that career development opportunities can be considered from different perspectives; modern universities provide various professional development opportunities for improving a wide range of transferable skills including career development skills, the latter being essential to a successful job search both in the local and international labor market. The paper is based on 1) the analysis of theoretical sources and official EU documents on the main issues of higher education in relation to students' professional career management; 2) students' essays content analysis (interpretation method).

Keywords: higher education, education manager, career planning services.

Introduction

Today, education and research are important prerequisites for the economic and cultural development of the society (The European Higher…, 2005). Modern universities are operating in an increasingly globalized environment that is characterized by fierce competition and by the emergence of new requirements (The role of…, 2003; Communication from…, 2013). Contemporary higher education institutions being sophisticated organizations, education managers operate in a very complicated context, the complex arrangement of many causative factors form the settings, in which educational managers make strategic decisions aimed at achieving competitive advantage and academic and research excellence (Stukalina, 2013).

As the international education market is developing fast, the main task for modern European universities is providing quality higher education in the framework of creating the European Higher Education Area (Bologna Declaration, 1999; Realising the European, 2003; The role of…, 2003; Standards and Guidelines…, 2005; London Communiqué, 2007; The European Higher…, 2012; High Level…, 2013). Intensified competition between higher education institutions in terms of increasing enrolment rates and retaining students makes education managers reconsider their strategy aimed at identifying the indicators and mechanisms of competitive advantage (Stukalina, 2014a,b). In that regard, greater emphasis should be placed on providing university graduates with the necessary tools to successfully launch and manage their professional career.

The aim of this paper is to initiate a discussion about the role of career guidance in higher education system of Latvia. This paper argues that career awareness and career development instruction must be provided to all students of Latvia throughout their studies. The paper also reports the results of students' essays content analysis stating the role of higher education institutions to prepare students to be ready to develop their professional career both in local and international labor market. The paper is based on 1) the analysis of theoretical sources and official EU documents on the main issues of higher education in relation to students' professional career management; 2) students' essays content analysis.

Methodology

The paper is based on 1) the analysis of theoretical sources and official EU documents on the main issues of higher education in relation to students' professional career management; 2) students' essays content analysis (interpretation method).

The content analysis of written essays was used to explore Riga Technical University students' opinions on the management of the students' professional career. One hundred four students of Riga Technical University (RTU) wrote an essay "My University and My Professional Career Prospects Both in the Local and International Labor Market". In the research, there participated students from different RTU faculties – the Faculty of Civil Engineering, the Faculty of Architecture and Urban Planning, the Faculty of Electronics and Telecommunications, the Institute of Applied Linguistics and of different nationalities, among them: Latvians – 57 students; Russian speaking students – 27 participants; foreign students – 20 participants. Consistent with the theoretical literature (Hamel, 1993; Cropley, 2002; Kroplijs, Raščevska, 2004; Geske, Grīnfeds, 2006) the content analysis was done in the following way: 1) the text was divided into fragments, which consist of the statements given by respondents and which characterize or/and interpret their experience; 2) the meaning of the content was clarified; 3) the statements, which express similar ideas, were grouped in categories; 4) the categories were united forming more extensive concepts, the basis of which was the content of the categories.

Results and discussion

1. Analysis of literature and official EU documents on education

The analysis of official EU documents on higher education shows that the emphasis is placed on making modern universities internationally more attractive and competitive, European universities playing a critical part in the creation of a Europe of knowledge (The role of…, 2003; The Lisbon Strategy…, 2010).

The tertiary education systems of many OECD countries have experienced fast growth over the last decade; they are now facing new pressures as the result of a globalizing economy and labor market (Huisman, Santiago, 2007). As stated in the OECD Report "Education Indicators in Focus" (How are University…, 2013), between 2000 and 2011, the number of international students has more than doubled; almost 4.5 million tertiary students are enrolled outside their country of citizenship. Intensified competition between modern public and private universities in terms of increasing enrolment rates and retaining students makes education managers re-examine their strategy aimed at achieving competitive advantage.

The issues mentioned above drive competitive advantage and performance of higher education institutions of Latvia as well. They are closely related to students' professional development that encompasses all educational activities and includes students' intellectual growth and career development. The Lisbon agenda for growth and jobs requires that EU citizens are equipped to "manage labor market changes more effectively", and are given opportunities to "develop their skills, and gain access to information, advice and guidance to handle their careers" (Career development…, 2008). In this respect, lifelong information, advice and guidance play a prominent role in supporting individual citizens on their learning and career paths (Lifelong guidance…, 2011).

Thus, the role of universities in providing their students and graduates with appropriate career management is increasing. The need for career guidance increases due to some important factors.
- Universities operate in a globalized and extremely competitive international environment; this fact makes adopt new market-oriented strategies.
- More effective career guidance would promote university graduates' participation in lifelong learning.
- More active career management will support the development of a knowledge-based economy as well as benefit individuals, employers and society in general (Career development…, 2008).
- The expansion of tertiary participation broadens its purposes beyond preparing students for traditional professions and the link between particular study courses and specific labor market destinations becomes less direct (Education Policy …, 2003).

- The EU Member States regard the development of career management skills as a lifelong process, which should be supported by information, advice and guidance (Lifelong guidance…, 2011).
- Creating a successful and competitive European Research Area that includes a substantial number of skilled researchers and diversity of research groups
- The necessity to secure growth prospects and innovation within the EU by integrating older workers in the labor market (Second Career…, 2013).

The constant progress of globalization will make higher education institutions of all kinds prepare students with skills and knowledge that will support their inclusion in an increasingly borderless economy (Altbach, Reisberg, 2009). Thus, various professional development opportunities should be available to university students for improving a wide range of transferable skills including career development skills, the latter being essential to a successful job search both in the local and international labor market.

Career development opportunities can also be associated with the internal career development resources provided by a university. Students' professional development is a process that occurs at every stage of their graduate career, so all students must be afforded professional development opportunities throughout their studies. Today, many universities worldwide manage students' career development through Career Development Centers that focus on creating partnerships with industry to help students find their career paths. Modern universities are no longer expected to work in isolation; they work closely with industry, community and government (Altbach, Reisberg, 2009).

In the EU, guidance and counselling are regarded as key strategic components for implementing lifelong learning and employment strategies at regional and national levels; "as European knowledge-based societies are committed to developing individuals and economies through lifelong learning, citizens require information, guidance and counselling more than ever before to make proper education and career choices and acquire the right skills for successful adjustment to their environments" (Establishing and developing…, 2008). So, higher education institutions should offer their students career guidance and counselling services that will promote their intellectual evolution and career development. In the context of lifelong learning and active labor market policies, managers responsible for career guidance services face the challenge to move from helping students decide on a job or a study course, to the broader development of career management skills linking it to students' overall development (Education Policy …, 2003). Today, a wide range of services should be made available to enrollees, students, alumni and even employers, the services being aimed at maximizing the students' employability after graduation and supporting their lifelong employability. These services can be different in each higher education institution.

2. RTU students' essays content analysis

According to students' opinion, the management of students' professional career starts early – before students have entered a higher education institution. In their essays, students write that the choice of the profession is the most important and complicated decision of their life (Latvians – 2, Russian speaking students – 1, foreign students – 2): "I have thought of my professional career since childhood because this decision will influence all my life - the conditions of life, the environment and the family.

Professional career begins already in the childhood, at school. It is determined by the way of life, personality, environment and conditions" (Latvians – 9, Russian speaking students – 4, foreign students – 9). Students also express the opinion, which proves that they have failed to choose the right profession: "I cannot affirm that the specialty I am studying now is the most appropriate for me", "The most serious problem is the problem that we do not know what we want to do to succeed in our life", „I do not like the profession I have chosen because I do not feel to be talented in this field" (Latvians – 3), "It is possible I will study abroad to get other profession" (Russian speaking students – 1). Therefore, the data indicate that schools and higher education institutions should pay more attention to the issues of pupils and students career management to help them to make the right choice.

Students also mention a few preconditions that may help them choose the most appropriate profession. In their point of view, it is necessary to choose the profession characterized by the following features.

- It is interesting, enjoyable and useful – "No job could be done well if you are not happy doing it", "I know I will develop if I do something I really like", "It is not enough if you like your profession it is also important if your profession is useful and needed" (Latvians – 6, Russian speaking students –2, foreign students – 4).
- It is appropriate for your personality, and with a help of which you may realize your talents and grow professionally – "The professional career is not so dependent on the country you live but on your skills, knowledge, experience, interests, talent, moral standards, the influence of parents and friends. There always and everywhere will be difficult situations and conditions, everything depends on the personality" (Latvians – 25, Russian speaking students – 4, foreign students – 2), "It is important to have a profession you can realize your aims and ideas" (Latvians – 5, Russian speaking students – 1, foreign students – 2), "If you have specific skills, a high qualification, creativity and willingness to work, it is easy to find a job and get an appropriate payment both in your native country and abroad" (Latvians – 9, Russian speaking students – 4).
- It gives a possibility to work in a positive atmosphere (Latvians – 1, Russian speaking students – 2, foreign students – 4).
- There are possibilities to grow and be promoted - "At the beginning I agree on working for a lower payment if I am offered a training and can develop professionally, be among the best, work in an innovative environment" (Latvians – 3, Russian speaking students – 2, foreign students – 2).
- It can which guarantee a stable and competitive salary, comfortable living conditions (Russian speaking students – 1, foreign students – 4).
- Since the key task of a contemporary higher education institution is to help students acquire an assortment of transferable skills and prepare them for professional activities, it is necessary to find out how the students evaluate the role of education and a university in the development of their professional career. In their essays students, mainly Latvians, evaluate the role of a higher education institution positively emphasizing that a good education is the first step to make a successful professional career (Latvians – 15, Russian speaking students – 2, foreign students – 2): – "The level of education in my specialty is high and gives the opportunity to make a professional career also abroad", "The studies abroad are not so qualitative in comparison with Latvia" (Latvians – 1), "I can learn from my teachers at a higher education institution" (Latvians – 4).

Students also stress the undoubted significance of combining the theoretical knowledge with a practical experience to be competitive in the labor market - "The practical experience is highly evaluated in the labor market" (Latvians – 2, Russian speaking students – 1); "The graduates of the higher education institutions in Latvia have difficulties to find a job because of the lack of experience. It is also complicated to find the internship during the studies" (Latvians – 11, Russian speaking students – 2). That is why graduates have a tendency to work in the field which is not connected with their studies. The insufficient payment is also the reason of it - if the salary is higher, students choose the job in a different field (Latvians – 2, Russian speaking students – 1).

To conclude, the main preconditions, which are necessary for developing a successful professional career, are the following: a good education, practical experience and use of advanced modern technologies.

Students' professional career could be developed both in their native country and abroad. In the context of achieving the main goals set in the Lisbon Strategy (2000) – preparing specialists who could be internationally competitive, could work in a multicultural environment, and have advanced language skills and intercultural communication skills – it is essential to find out if students consider themselves to be enough competitive to develop a professional career abroad. The obtained data show that there are a lot of students, especially foreign students, who are going to develop an international career: Latvians – 14, Russian speaking students – 5, foreign students – 11. The most popular reasons why students choose a professional career abroad can be summarized as follows:
- there are large international enterprises abroad that need young and competent graduates. Foreign labor market is open to highly qualified employees (Latvians – 21, Russian speaking students – 7, foreign students – 2);

- there are better working conditions, a higher salary, social guarantees and a more flexible work schedule, which allows to have more time for a family (Latvians – 15, Russian speaking students – 9);
- it is possible to get new experience – to "see the world", get new information, improve language skills and intercultural communication skills; though "going abroad" is always risky. For some students, it is important to take the risk, because "we never know" what exactly may help us to become good specialists". And there is always a possibility to return back but with a different experience and skills (Latvians – 3, Russian speaking students – 6);
- it is important to gain an international experience, which on return they would use to help the native country to develop and cooperate with other countries (Latvians – 5, foreign students – 2).

Students also mention the possible problems, which may occur when making an international career abroad; they can be summarized as follows:

- there is a fierce competition in the international labor market; young people do not have necessary experience and specific skills which are demanded in the labor market; not always immigrants have a possibility to get a high status position; it is necessary to have contacts to get a "good job" (Latvians – 10, Russian speaking students – 2);
- because of the reasons mentioned above young people choose to do an unqualified work when working conditions and environment are often not favorable for people's health and life; the payment also does not correspond to the work done; immigrants have to do jobs which are not popular among the local people (Latvians – 5, Russian speaking students – 4);
- the life abroad is more expensive than in Latvia (Latvians – 3, Russian speaking students – 1);
- mentality, people, language, environment are not familiar; there is no homeland, family and friends (Latvians – 4, Russian speaking students – 9, foreign students – 1).

However, there is a large number of students who want to make a professional career abroad. There are also many students, mainly Latvians, who have plans to stay and work in their native country (Latvians – 43, Russian speaking students – 7, foreign students – 5) - "My native country is developing very fast and there are good job prospects" (Latvians – 14, Russian speaking students – 5, foreign students – 10); "Old employees retire and are substituted by young ones – graduates. There are not large enterprises in my professional field but they are stable, modern and have their place in the labor market" (Latvians – 12, Russian speaking students – 2).

The data indicate that there are also other advantages to develop the professional career in the native country – "you know local people, their behavior, environment, economics etc. "I feel much more comfortable in my native country. Abroad you have to start from the beginning" (Latvians – 8, Russian speaking students – 4, foreign students – 1); "Latvia is my motherland, I have been brought here, here is my culture and language, I am a patriot" (Latvians – 11). It is also important for students "to be with their family and friends, be supported and helped by them" (Latvians – 9, Russian speaking students – 4, foreign students – 1).

At the same time, students also mention some problems when developing their professional career in the native country; they are the following.

- There are not enough possibilities to have a job according to the education and interests, realize the potential, work in a highly competitive environment – "There is a small number of large, international enterprises in my professional field. It is hard to promote and make a top level professional career here. My professional development could be slow here" (Latvians – 6).
- The competition in the largest and most popular enterprises is very high here – "You have to be the best" (Latvians – 3), "It is possible to find a job only with a help of necessary "contacts" (Latvians – 8); "The smaller the country is, the smaller its possibilities to provide people with a job are" (Latvians – 8, Russian speaking students – 1).
- Salary is insufficient – "There is a lack of high qualification specialists in my native country who leave it because of a better payment abroad" (Latvians – 6, Russian speaking students – 2, foreign students – 3).

- Politics, economics, environment and conditions in the native country are not favorable for the development of private enterprises (Latvians – 6, Russian speaking students – 2).

In general, the performed analysis has produced a few interesting *findings*.
- Higher education institutions should pay more attention to the issues of students' professional career management, and offer learners career guidance and counselling services throughout their studies.
- Higher education institutions should take into account the most important preconditions, which help students to choose the most appropriate profession – interest, suitability, promotion possibilities, financial security and a positive working environment.
- To manage students' international career development higher education institutions should take into consideration the main reasons why students choose to develop their professional career abroad (e.g. more possibilities to be promoted, better working conditions, a higher salary, social guarantees, etc.).
- To help students to develop their international career abroad higher education institutions also have to take into account the possible drawbacks, which they may encounter in the international labor market (e.g. necessity to have specific skills and qualification, a high level of competition, cultural differences, etc.).
- To manage students' career development in the local labor market higher education institutions have to consider the main reasons why students choose to develop their professional career in their native country (e.g. good prospects to make a career for young and qualified graduates, a familiar culture, friendly environment, etc.).
- To help students perform a successful career in the native country the main drawbacks of the local labor market should be also taken into account (e.g. a lack of opportunities for having a job according to the education and interests, realizing the potential, working in a highly competitive environment, an insufficient salary, unfavorable economic and political conditions and business environment.

Conclusions

In the context of globalization, development of the knowledge-based society and life-long learning, career development opportunities can be considered from different perspectives. Broadly, career development opportunities can be associated with the main trends for the future of higher education. They can also be related to the internal career development resources offered by a university. Modern universities provide various professional development opportunities for improving a wide range of transferable skills including career development skills, the latter being essential to a successful job search both in the local and international labor market.

It is long overdue for higher education institutions of Latvia to become better at monitoring and directing their students' professional development. Universities should offer their students career guidance and counselling services that will promote their intellectual evolution and career development throughout their studies. This can be done by managing students' career development through Career Development Centers that focus on creating partnerships with industry to help students find their career paths.

People have different career guidance needs at different stages of their education. As diverse kinds of education and training are interconnected (pre-school education, primary and secondary education, higher education, post-graduate education, distance education, etc.), universities have to work in close partnership with schools, colleges, government agencies, non-governmental and business organizations. This way, they will be able a) to facilitate the transition of learners between different institutions and phases of education; b) to connect career development and employability with lifelong learning.

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Professional Purposefulness of the Students of Technologies Education

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Abstract. The article analyses the characteristics of the professional purposefulness of the students of technologies education of the Lithuanian University of Educational Sciences and the change of professional purposefulness during their studies. The quantitative and qualitative study was conducted in 2013. The results of the study revealed that almost half of the interviewees have the vision of the future career which they link to the work of a technologies education and point out that they had a disposition to work as a teacher. The students of technologies education choose pedagogical studies for different motives, however, with an eye to pedagogical work. Only one fifth of the students do not have the vision of their future career, and approximately half of all the informants link their career to a teacher's work. After their student placement the majority of students are determined to work or not to work as a teacher. It has been established that pedagogical placement is one of the essential factors determening the pedagogical professional purposfulness of the students of technologies education.

Key words: professional purposfulness, professional self-determination, pedagogical placement, technologies education, higher education.

Introduction

Professional purposefulness has been the focus of scientific interests for decades both in Lithuania and all the world. The early scientific studies analysing the factors that influence the choice for a teacher's work reach the pre-war period: C. W. Valentine (Valentaine, Watt, 1934) examined the reasons due to which university students choose a teacher's work, whereas W. B. Tudhope (1944) analysed what prompts college students to work as a teacher. In Lithuania, pedagogical vocation was examined on the philosophical plane by A. Maceina (1990), L. Jovaiša (2007) sought to reveal psychological aspects of this phenomenon. The factors determining professional self-determination, the significance of pedagogical vocation for educational practice, the role of pedagogical placement when choosing a pedagogue's path are relevant scientific questions and are examined until now (Balčiūnaitė, 2006; *Braslauskienė, Petružienė, 2011;* Gaučienė, 2009; Kanapickaitė, 2010; Pociūtė, Isiūnaitė, 2011; Rauckienė, Monkevičius, 2012; Watt, Richardson, 2012a; Watt, Richardson, 2012b).

In a pedagogical activity, professional purposefulness plays a fundamental role, because, in vocational choice, personality needs must be in keeping not only with his wishes, but also his abilities, purposefulness and vocation (Balčiūnaitė, 2006). J. Kanapickaitė (2010) systematises the concept of professional purposefulness which is found in scientific literature: this a part of personal purposefulness reflecting the tendencies of human relationship with his future or present profession, the continuing need and desire of a personality to work a chosen work and the objective to realise his own potential when working in a professional field.

As is claimed by M. Barkauskaitė and P. Peciuliauskienė (2007), conscious vocational choice is an individual decision of a student, having become aware of the criteria of professional suitability for a certain profession and knowing objective information about important features of the chosen profession, further perspectives for their training and development by practically testing own determination and capabilities to work successfully. The Profession Guide (Profesijos vadovas, 2010) defines the concept of vocational self-determination as decision-making by a person regarding the character, form, type and manner of working activity, taking into consideration internal and external conditions which are at work when making a decision. Vocational self-determination is determined by personal motivation, interests, needs, inclinations and public opinion. A decision depends on the information available about possible professions, specialities, educational institutions, self-evaluation, the combining of dreams and reality, duty awareness and the manner the organisation of vocational orientation. Vocational choice is an ongoing long term process. Before deciding a person assesses different possibilities and makes a lot of partial decisions (Antanaitienė, Sajienė, 2012). The preparation

to choose a future career begins while learning at general education school and during this period it becomes important to a school to combine the objectives and possibilities of their educatees, taking into consideration dynamic social and economic needs of the society (Pukelis, 2004). At school, the initial vision of a future career forms. However, the choice of a graduate studies programme of those who have already decided what career they want to pursue is changed by different external and internal factors, as, for example a location, price and prestige of studies, friends etc. Professional self-determination also changes during studies (Gaučienė, 2009; Rauduvaitė, Ramanauskienė, 2010), whereas after studies not all the graduates seek a career corresponding to their education. This problem is also relevant when preparing pedagogues the professional self-determination of whom is greatly influenced by initial pedagogical experience and pedagogical placement. Practical activity reveals whether a young teacher possesses sufficient knowledge and whether he is capable of action. Pedagogical placement is the period during which final professional attitudes of a student towards a pedagogical work, his approach to the rights, duties and responsibility of the teacher form (Barkauskaitė, Pečiuliauskienė, 2007). It is especially relevant when teaching technologies which are oriented towards practical activity of pupils and demand an exceptional creativity of a teacher and special skills. So far, in Lithuania, the professional purposefulness of future teachers of technologies has not been researched, there is a lack of scientifically reasoned information of professional intentions of future teachers of technologies and the change of vocational choice during their studies. Pedagogical placement is the period during which final professional attitudes of a student towards a pedagogical work, his approach to the rights, duties and the teacher's responsibility form (Barkauskaitė, Pečiuliauskienė, 2007).

The goal of the study is to reveal the specificities of professional purposefulness of the future teachers of technologies and its change during their studies. **The subject of the study** is the professional purposefulness of the future teachers of technologies education and its change.

Methodology

The following theoretical and empirical methods of scientific research were applied: the analysis and synthesis of scientific literature, diagnostic Q type data collection (questionnairing) and a semi-structured interview. The method of qualitative content analysis was applied for the analysis of a semi-structured interview. The study was conducted in two stages. During the first stage, in order to assess the data quantitatively, a questionnairing survey was conducted among 60 students studying technologies education (1st-4th year of full-time studies and 1st-5th year of part-time studies) at Lithuanian University of Educational Sciences. 79% of all (of the whole general population) the students of full-time and part-time studies of technologies education of Lithuanian University of Educational Sciences participated in the survey. The questionnaire comprised closed-ended type of questions. The questionnaire was based on FIT-Choice scale (the scale of factors influencing the choice of a teacher's profession) (Watt, Richardson, 2012a). By using this choice scale of factors, the sudies on the choice of a teacher's profession were conducted in Ireland, Australia, the United States of America, Great Britain, Germany and Norway (Heinz, 2013; Watt, Richardson, 2012b). The factors that have been established by S. Kregždė (1988), Helen M. G. Watt et al. (Watt, Richardson, 2012a), which have the greatest influence when choosing a teacher's profession, were also invoked. When processing the results of the study no statistically reliable differences between variables have not been established due to insufficient number of informants which was determined by the total number of the students of 1st-5th year of studies of technologies education. During the second stage, in order to perform quantitative analysis, an interview was conducted. 10 students of the 4th year of studies of technologies education were interviewed. The students of the 4th year of studies, having completed their studies, begin their professional career, therefore, their professional purposefulness is most pronounced. That determined the selection of the informants to perform the quantitative study.

Results and discussion

When examining professional disposition it was important to ascertain what factors had influence while choosing the studies of technologies education. Almost half (48.3%) of the interviewees allocated the studies of technologies education number one in their list, 30% pointed out it as number two, 13.3% pointed it out as number three and only 6.7% of the respondents pointed out that these studies were

number 9-12 in their list. The targetedness of choosing the programme of the studies of technologies education is demonstrated by the analysis of factors which determined the choice of studies. The respondents were requested to point out the influence of every factor depending on its importance to a respondent's choice. When analysing the data, it came to light that the choice for the programme of the studies of technologies education of 56.9% of the respondents was influenced by the desire to earn a university degree and their interest in the subject of technologies (29.3%). The awareness of their pedagogical capabilities had influence on 29.8% of the interviewees.

According to L. Jovaiša (1981), professional purposefulness is a complicated personality trait expressed not only as a positive attitude towards a certain profession, but also as an active desire to exercise a certain profession. In order to identify whether the students of technologies education consider pursuing a pedagogue's job in the future, the vision of the students of technologies education for a future career was examined and how it correlates with a technologies teacher's work (Figure 1). Almost half of (46.6%) of the interviewees maintain that they have the vision of their future career which they link to the work a technologies pedagogue. One third of the students (31.7%) have the vision for their future career, however, they do not intend to choose a teacher's career. 21.7% pointed out that they do not have the vision for their future career. Pedagogical placement is described as the beginning of students' settling into pedagogical community and the period of acquiring initial operational capacities (Jovaiša, 2007). K. Pukelis (2004) maintains that the first pedagogical experience has the greatest importance for a successful adaptation of a young teacher at his school. Very often the whole determination to work a teacher's work in the further future depends on the first such experience.
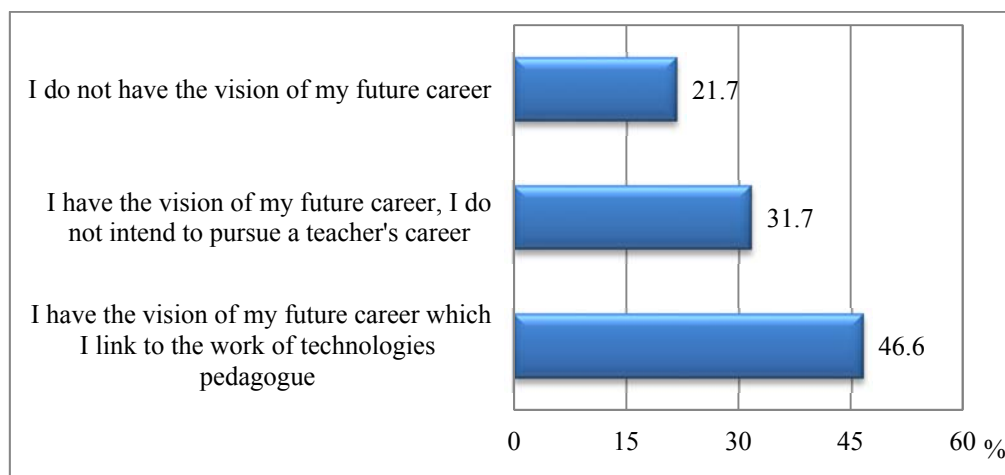
Figure 1. The distribution of the informants' answers on their vision for a future career before their field placement.

In order to establish what influence on professional purposefulness pedagogical placement had, the students were asked whether they had already determined to work/ not to work at school before their student field placement. 41.7% of the interviewees positively answered this question, whereas 36.7% of the informants answered that they had not such determination before their pedagogical placement.

When ascertaining what impact on the earlier determination to choose the work of technologies pedagogue student placement had (Figure 2), it has been established that 28.3% of the respondents point out that their student placement changed their determination, whereas 26.7% pointed out that their student placement confirmed the earlier determination. Similar research data is also pointed out by M. Barkauskaitė and P. Pečiuliauskienė (2007) who researched how the attitude of the students of Vilnius Pedagogical University (now Lithuanian University of Educational Sciences), who were undergoing their student placement, towards teacher's profession was changing during their student placement: 87.7% of the students, who have undergone pedagogical placement, assess a teacher's work positively and partly positively, whereas the negative attitude towards a teacher's work was expressed only by 4.2% of the respondents.
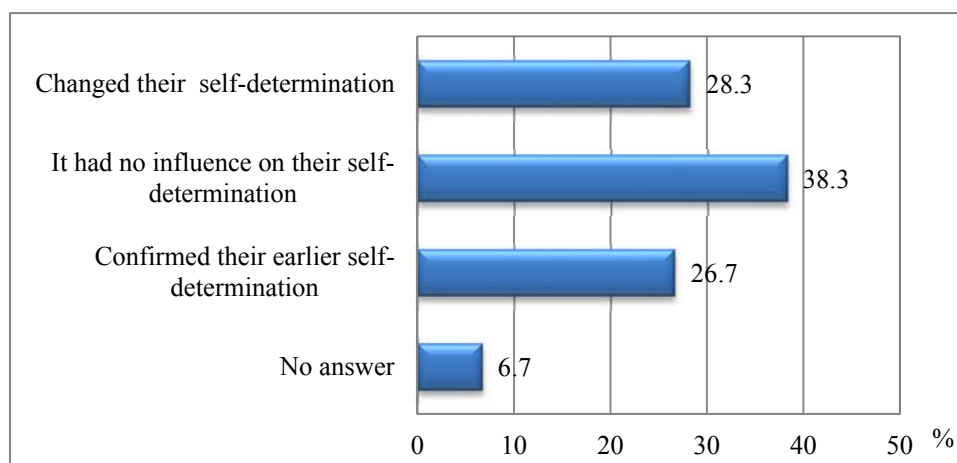
Figure 2. The percentage frequencies of answers to the question "What impact did your student placement have on your earlier determination?"

Having interviewed the informants whether, in their opinion, pedagogical placement has influence on their pedagogical determination, a vast majority (76.7%) of the informants pointed out that their student placement had influence on choosing a pedagogue's profession. Only 8.3% of the interviewees pointed out that their student placement did not have any influence on their professional purposefulness. It is linkable to not linking a professional career to a teacher's work. It can be presumed that the students, who before their student placement were against working a teacher's work in the future, changed their opinion. The students, who even before their student placement had linked their career in the future with school, only were once again ascertained of the rightness of their decision. Consequently, pedagogical professional purposefulness becomes apparent after their student placement.

According to the data of the study conducted by J. Navaitienė (2004) on the attitude of the students of Vilnius Pedagogical University (now Lithuanian University of Educational Sciences) towards the obstacles to professional training, the students of the first year of studies most frequently pointed out the absence of professional self-determination as a substantial obstacle to professional training, one third of the students of this year of studies had not been firmly determined to acquire the pedagogue's profession. When analysing the data of the study conducted by us it can be presumed that early pedagogical placement or individual pedagogical experience can significantly increase low motivation of future teachers of technologies to work pedagogical work at the beginning of their studies. According to the data of the survey of the graduates of Lithuanian University of Educational Sciences on their studies conducted by the Department of Studies of Lithuanian University of Educational Sciences in 2012, 56.2% of the interviewees pointed out that they considered that their student placement had assisted in better understanding the features of their future professional activity (Rauckienė, Monkevičius, 2012). Since 2010, pedagogical placement in the programme of technologies education is undergone from the first year of studies, and, since 2013, it is done from the second year of studies, therefore, it is likely that it will form the pedagogical purposefulness of students or will make it possible to assess the rightness of the choice of the studies. It can be presumed that after pedagogical placement the professional purposefulness of the students of technologies education becomes apparent, and student placement has decisive influence on the professional self-determination of a student.

The statistical results of the second stage of the quantitative study enabled to model questions to perform the qualitative content analysis of the answers. The qualitative study sought to ascertain what professional purposefulness features of the students of the fourth year of studies are. The participants of the qualitative study, when analysing the factors that led to choose pedagogical studies at Lithuanian University of Educational Sciences, pointed out a range of the factors which we have divided into two categories: external factors and internal factors. The results of the research enabled to divide external factors into three subcategories: external factors, listed by students, which led to choose studies at Lithuanian University of Educational Sciences, most frequently were parents, a teacher, final exams and total competition grade (Table 1).

Table 1

The statements of the students of the fourth year of studies on the factors which led to choose studies at Lithuanian University of Educational Sciences

Category	Subcategory	Confirming statement
The influence of external factors when choosing studies	Parents	*"When choosing studies the greatest influence was wielded by my parents, because they wanted me to study what I liked and what I wanted".* *"The greatest influence was wielded by my parents".* *"My parents".* *"The greatest influence was wielded by the parental encouragement and the information on the speciality disseminated at school".*
	Teachers	*"Neither my parents nor friends, <...> mostly teachers".* *"Teachers".* *"<...> The influence was also wielded by my technologies teacher, because she saw my capabilities during the lesson of technologies".*
	Final examination, total competition grade	*"The opinion of parents, teachers and friends had no influence when choosing studies. <...> The greatest influence was wielded by total competition grade and the city. <...> I was also mostly interested to work as a pedagogue <...> My total competition grade allowed me to enter the university to study technologies educology, but I have to pay for my studies".* *"Final examination had the greatest influence, but, anyway, it was me who chose these studies. I also talked with my parents, friends and teachers, but they did not determine my choice of studies".* *"I enered voluntarily, my total competition grade was sufficient for entering".*

Internal factors have also been divided into three subcategories: the answers of the informants mentioned the desire to be a teacher, desire to work with children, desire to try their hand at work with children (Table 2).

Table 2

The statements of the students of the fourth year of studies on the factors which led to choose studies at Lithuanian University of Educational Sciences

Category	Subcategory	Confirming statement
The influence of internal factors when choosing studies	The desire to be a teacher	*"It is very important, I have always wanted to work as a teacher".* *"<..> the only and irreplaceable desire was <...> to work as a teacher at school. I chose pedagogue's studies strongly convinced what I want".* *"When choosing studies at Lithuanian University of Educational Sciences the desire to work as a teacher is the most important, because, if there is no such desire to be a teacher, then studying will also be not interesting".* *"It is very important".*
	The desire to work with children	*"The desire to work with children is also important, because you need to know how to treat children, to work with them and the most important thing is to motivate them to learn".* *"It is certainly important, but it was not the main criterion to me <...> I have always loved to work with children, I think I connect with them".*
	The desire to try their hand at work with children	*"It has always been fun to work with pupils, but I wanted to learn my potential".* *"There was no great desire to work with children, but after my student placement I would not refuse such work".*

The quantitative analysis of the answers of the students of the fourth year showed that the most important factor when choosing pedagogical studies is the desire to be a teacher. It can be demonstrated by the statements of the informants: *"<...> I have always wanted to work as a teacher", "<...> the only and irreplaceable desire was <...> to work as a teacher at school", " When choosing studies at Lithuanian University of Educational Sciences the desire to work as a teacher is the most important <...>".* The desire to work with children is also described as an important criterion, whereas the desire to try his

hand at work with children as not that important. It confirms and complements the data acquired during the quantitative study.

The students distinguished the perception of their pedagogical capabilities as a very important factor regarding their vocational choice: *" I have always wanted to teach others, to show what I am able to do myself"*; *"The desire to teach children, the implementation of innovations"*; *"<...> the ability to work with children and the desire to communicate information <...>"*; *"The comeback to school was the factor to try my hand at working as a teacher"*; *"<...> I would also be able to teach others about it as well, I think I would be able to be a pedagogue in this case"*. It can be presumed that the students began their studies while linking their future career to a teacher's work.

The fact that the informants pointed out that pedagogical placement had a great influence on the choice of their future career should also be noted. It is demonstrated by the often repeated words in the statements by of the interviewees on their student placement: *"great", "the greatest", "very great"*. The influence of pedagogical placement on pedagogical purposefulness is obviously great: the students expressed their desire to work as a teacher in the future and pointed out that they became more motivated to choose a pedagogical path after their student placement than before their student placement: *"<...> my student placement showed that this work is really for me", "<...>I will try to get a job corresponding to my education", "<...> I have understood that I am 100% for working as a teacher"*.

When describing the importance of their student placement and its impact on their professional purposefulness the students reflected: *"During the field placement all the pros and cons of working at school become apparent, some understand that they are irritated by the noise emitted at school, others are irritated by children", "During the field placement the students are able to see themselves for the first time, to see their strengths and weaknesses, their areas for improvement, I would also think that pedagogical placement results self-determination to work at school";* The informants distinguished their student placement as the period during which they apply theoretical and practical knowledge accumulated during their studies when working at school, puting themselves to test in practice, i. e. while working at school according to their speciality. The analysis of students' answers showed that the informants, when undergoing their student placement for the first time, saw school life through teacher's eyes, understood whether they liked to work with children, whether they had pedagogical vocation, whether they would be able and would want to work in the future while exercising their acquired teacher's speciality: *"<...> The role of the student placement was very great. The students really encounter their potential and see their capabilities, whether they can do this work or not"; "<...> Student placement is the very best period when a student can find all the answers to the questions arising to him whether he will be able to work as a teacher"; "<...> the impact of a student placement when choosing pedagogue's path is important, because while undergoing your pedagogical placement you are able to understand whether you are ready to do this work, whether you will be able. You also become aware whether you have a pedagogue's vocation and whether there is the desire to work with children"*.

All the informants pointed out that pedagogical experience acquired during their pedagogical placement was important, even if after finishing studies they did not choose to work as a teacher, they pointed out that they would be able to use this experience everywhere. Pedagogical placement assists in deciding not only whether this work is appealing, but also whether a person will be able to work it. It creates conditions for certain students to call into question their pedagogical purposefulness: *"The impact of the field placement is great. During it I saw that work with children is intensive and tiresome <...> I think that I would not be able to work at school"; "After my pedagogical placement I understood that I would postpone work at school to a later date"*.

To sum up, it could be said that the students of technologies education choose pedagogical studies for different motives, however, with an eye to pedagogical work. Pedagogical placement is the period during which the students, while putting themselves to test in practical activity, endeavour to form their overall opinion on a teacher's career while working a teacher's work themselves and making sure whether they conform to the imposed requirements, have capabilities necessary for a future teacher. A student placement provides an opportunity to definitely decide whether the studies of the speciality of a technologies teacher have been chosen rightly.

Conclusions

- The study revealed that the desire to acquire a university degree had the greatest influence on more than half the informants when choosing the programme of the studies of technologies education, for approximately one third, it was interest in the studies of technologies and the awareness of their pedagogical capabilities.
- Almost half of the interviewees maintain that they have the vision of the future career which they link to the career of a technologies pedagogue and point out to have had the disposition to work as a teacher before their pedagogical placement.
- It has been established that pedagogical placement is one of essential factors determening the pedagogical professional self-determination of the students of technologies education. More than one third of informants point out that pedagogical placement changed their dispposition to that of not working as a teacher, almost the same number of students note that their student placement confirmed the earlier determination – it assisted in ascertaining the rightness of their decision. A vast majority (76.7%) of the informants maintain that a student placement has influence when choosing the pedagogue's career after studies.
- The students of technologies education choose pedagogical studies for different motives, however, with an eye to pedagogical work. Only one fifth of the students do not have the vision of their future career, and approximately half of all the informants link their career to a teacher's work. After their pedagogical placement the majority of students are determined to work or not to work as a teacher.

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Conditions for Use of Dialogue Method of Students' Career Guidance in Secondary Vocational Education

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Abstract. The dynamic contemporary society where continuous change is inevitable, dialogue practice is regarded as an important component of sustainable change and successful cooperation. Its presence is relevant in everyone's life, including career development and guidance. In the secondary vocational education environment where learning of general and special theories interspersed with practice of special subjects, requires not only dialogue as a simple form of communication, but dialogue method as a package of deliberate sequential activities that can efficiently operate under conditions if between student and learning environment occurs reciprocal communicative interactions that promote new behavior and attitude towards themselves, their learning and for the further life plans. The scientific article is answered to the following *questions*: Why is need dialogue method in the career guidance of students of secondary vocational education? What conditions ensure successful use of dialogue methods in students' career guidance in secondary vocational education? *The aim of the study* is to explore and evaluate the conditions that ensure the successful use of the dialogue methods of students' career guidance in secondary vocational education. *Objectives*: 1) to describe the dialogue method and its principles; 2) to justify the need for dialogue methods career guidance of students in secondary vocational education; 3) to characterize the conditions that promote the dialogue method of guidance of students in secondary vocational education.

Keywords: dialogue method, career guidance, conditions of the use of dialogue method, vocational education.

Introduction

Usually people, who are interested in a targeted search for a solution to a particular problem or issue, engage in the dialogue. In this communication they express their needs, values and attitudes, thus creating a dialogical environment that gives answers and enrich their understanding of the issues of common interest, as well as encouraged to make important decisions. But most importantly, creates a high-quality result. Dialogue allows anyone of its members to think, to express what does he/she think, listen carefully and understand each other. But it means to explore them and learn from others.

If used dialogue as a method in individual career guidance of vocational educational environment, his life and career construction occurs faster and more qualitatively. One of the conditions is a creation and developing of career-oriented dialogic educational environment that positively changing individual behavior and attitudes. However there are several factors that hinder the dialogue method performance. One of them is fragmentary and formal career guidance. Already in 2010, Regulations No. 852 of Cabinet of Ministers made a claim for its compulsory implementation in the education system, including secondary vocational education institutions (Kārtība, kādā..., 2010). Still the career guidance has been too slow, superficial and without visible positive results. This is evidenced by the significant number of early school leaving students which have a tendency to rise, for example, in 2014/2015 school year it was 17.25%; 2013/2014 school year - 16, 87%, and 2012/2013 school year - 17.03% of the total number of students (Audzēkņu skaits..., 2015). If systematically organized career guidance works in a school environment in which actively involved all teachers and school partners, the same environment encourages student regularly to think and move on achieving to the career objectives.

The fact that the dialogue method is able to encourage students to construct self-life and career, including building of the new career-oriented attitudes and behavior, demonstrates foreign scientific research (Meijers, 2009; LaPointe, 2010; Reid, West, 2011; Bigelow, Elsass, 2015). It can take the form through an increasing number of independent searches of answers to the issues of interest themselves, related to the achievements of the personal learning.

Nature of dialogue method requires a purposefully organized systematic communication process in which the use of a variety of techniques can achieve the best possible results in a short time. It follows that the use of dialogue method is considered to be appropriate in career guidance because it focuses on the individual's self-realization and self-development, career exploration and planning, rather than the blind investment of personal and national resources in unmotivated self-development process. However, such dialogue method works in the environment of vocational secondary education, it is important to find out whether it has all the necessary conditions: firstly, there must be at least two persons involved in the communicative exchange, to live in roles of the speaker and listener by focusing attention on each other (Hinds, 1978, 598). Secondly, participants of dialogue must be *here and now* (Isaacs, 1999). It means to use active listening, which is very difficult to do at once and that should be acquired through the creation of new behavior, to listening and expressing self emotions as well as to respecting other. Thirdly, it is necessary to ensure a safe space for dialogue, or container, in which dialogue can flow freely (Bohm, 2004; Isaacs, 1999).

Methodology

The research was done by studying scientific literature and guidelines, as well as interviewing vice directors or responsible teachers of career guidance of vocational secondary schools about the use of dialogue method of students' career guidance. The data were collected during the seminar "Career Guidance in Vocational Education" organized by State Education Development Agency in October, 2015. The survey involved 16 respondents from 16 vocational secondary schools, representing all regions of Latvia. The obtained study data show that the features of using of dialogue methods are weak, because the conditions for its successful operation are fulfilled in partially but career guidance is a fragmental and superficial. The research results are important because reveals weaknesses of the learning environment that hinder the use of dialogue methods for the students' career guidance in vocational secondary education.

Results and discussion

Conditions for use of dialogue method are evaluated in relation to developed career guidance model by B. Law (Rethinking Careers…, 2005, 104-107), that theoretically demonstrates the presence of dialogue. The effective operation of model is based on the interest and readiness of all involved parties, including both teachers and employers and students to establish and develop a career. One of the conditions for use of dialogue method is <u>*context*</u> that helps to create a space or container in which the dialogue revealed in a variety of ways, ranging from student reflection to the empathic hearing on various points of view, changing attitudes and behavior.

First of all, those are *various informational resources* in the environment of vocational secondary school which systematic use encourages students to think about their professional choice, learning and career development. Currently, libraries and information canters of secondary vocational school are provided with materials of career-related information and those are available, but unfortunately, their use is passive. This is because the students grudgingly read the information and make it, only when requested by teachers. It is one of the causes that does not encourage students' reflection and self-awareness of their acquiring of profession and career development.

Secondly, it is *face to face* career guidance work in which student must be interested, proactive to ask and to speak with teachers and/or career professionals. This is a work in small groups and individually, which helps to learn about themselves and the world of work, to plan their careers and make decisions how to proceed. However it is recognized, that such students' discussions related to their needs and expectations are rare. Usually they are a group' teachers and the teachers of practical work, who heard by students. The assistance of career professionals is used in only 4 schools of the 16 surveyed.

Thirdly - *the records, portfolio development and career planning*. Here the student should to write a potential action plan for the realization of their professional aspirations. It would help to create notes about their experience, capabilities and their intentions in relation to working life. However, as showed the survey, students make up their career portfolio only in the one vocational secondary school. Teachers career counselors /or responsible for the career guidance expressed view that creation and maintenance

of portfolio is a laborious and complex process, having a lack of time to keep up with it. It had been an attempt to create career portfolio in the one of the survived schools, but unfortunately, it has not given the desired result. The respondents' answers indicate that they lack an understanding of the importance of the need for individual students' portfolio, as well as a lack of skills, how methodically and correctly to work out this plan. B. Law (Rethinking Careers…, 2005, 104) wrote that qualitatively and a meaningful created portfolio provides information relating to the student's personality and learning progress and quality of career development. It helps student to develop his own views on what he/she obtained from a variety of learning experiences in school and working environment. Fourthly, it is *a personal and social education* through which the student informs about their career prospects in many ways; also that it is necessary to link their career expectations with other life roles. Unfortunately, this activity is fragmented, because students are not always aware himself and self-influence through their social roles, or they has not learned or do not want to demonstrate their social roles. All of the respondents indicated that the results of personal and social education are felt after qualification practice, which takes place on the third and fourth school year when the student has strengthened assurance about their career path.

Fifthly, the *educational work of career development* in the classroom helps to understand, create and use acquired social skills from the previous setting. Those are used to get the on-site assistance of the teachers in the classroom, because they are acting as the professionals of the branch. According to the Law B. (Rethinking Careers…, 2005, 104-107), student participate in various activities of the planned work, where is being examined in detail the most important professional aspects of the work carried out by the teachers as professional experts. It helps student to create a real picture of the chosen career direction. Here student's career progress occurs through active *learning by doing*, which is based on career issues and decisions. It gives to student an opportunity to openly and freely share their thoughts and feelings about the career. With regard to the learning position, the respondents answered unanimously that it so happens, but not always and not all students are ready to take the initiative and to express their feelings and thoughts. Typically, there are 3-4 students from the group.

Sixthly, it is an *integrating career guidance work*. B. Law (Rethinking Careers…, 2005, 104) thought that student's individual career plan arises from what the subject teachers have said in lessons or are urged to think and operate in practice. In this way, student learning forming links with working life situations. However the real situation in surveyed vocational schools shows that teachers, especially, the practical work' teachers and practice managers are urged to think and operate in practice in relation to the their future occupation outside the compulsory education period, but often it is left in the form of recommendations, having are rarely followed by real actions. The situation would be much more optimistic, if schools practiced professional qualifications based on individual career development plan, where student sees his personal contribution and personal growth.

Seventhly, - it is connected with *the community-related activities*. As written by B. Law (Rethinking Careers…, 2005, p.104 -107), it is the cooperation with local employers and the community in which student has much more possibilities to recognize the relationship between his life and all the things what he/she learns in school. This is characterized schools' communication with the parents, employers and other responsible institutions about the career guidance work at school. However, very rarely there are cases when the school succeeds in fruitful communication with the students' parents about guidance issues. The reason has developed a view that career issues do not need any more to tackle, because students already have chosen their profession before enrolled in the relevant vocational secondary school. Involvements of students' gaining in work experience in local community projects, etc., what student can be used as learning resources, also are rare. This is because, not always local business capacity and opportunities can provide it.

The survey results showed that school co-operation with a local business and other partners has campaign and a formal nature, which does not provide a permanent feedback in order to promote functioning of career guidance at school. For example, on the question *does students' career management and future plans being discussed between the school managers to potential employers?* 10 respondents answered that it is *rare*, only 3 respondents admitted that they do *always* and 3 – *often*. On the question *has it ever happened that student talks about his life in relation to their choice of profession?* 12 teachers responded that it happens *rarely*, but in turn, 4 - believes that *often*. 7 of the 16

surveyed teachers notes that students do not always take the individual works, which encourages them to constantly think and solve problems according to their learning abilities and experience. On the question *does learners have the motivation perform their individual exploratory activities learning environment in connection with their career choice?* 13 teachers responded that *rare*. It indicates the fact that learning environment does not completely ensure the conditions for successfully dialogue.

All surveyed teachers believe that the students are always given the opportunity to rethink their newly acquired practical experience. However, it takes the form of campaign. For example, writing practice report (9 responses) during a qualification practice, school is organized "School Day" and practical advice when students share their experience; they filled in a questionnaire which assesses the place of practice. Negotiation and reflections on their newly acquired practical experience held in cooperation with the group's teachers, teachers of special subjects and far as possible with career professionals (if one is available).

Like all surveyed teachers considered that they received feedback from students about their newly acquired knowledge, skills and practical experience in the work environment. It manifests in different ways - the most - students practice conferences (11 responses), writing of practice diaries (4); in negotiates among students, teachers and practice mentors from an establishment (5); it is a communication on social networks or by phone (2). Although all 16 of the respondents said that in school education process is established training exercises that test students' professional competences connected with the real working life problems (13 – always; 3 - often), but it should be noted that it has not contributed to the students themselves to be active in their career management.

Both observations of the author of this article and surveyed teachers have given an opinion, which is also confirmed by the Dutch scientists (Meijers, 2009; Mittendorff, Jochems, 2008) that for the big number of the vocational secondary schools 'students the school is a place where should they someone will tell how to do things, and that they will make self life unpleasant, if will do it wrong. They principal activity of the school is not targeted learning, but performance of tasks that must be done, though, or at least with minimal effort and unpleasantness. But usually they do not care how they deal with. If they can do this, they will do; if experience teaches them that it does not work very well, they will turn to others - illicit means that completely kill any target that has been in mind of the task-giver.

This points to the fact that these students have not cleared, meaningful their vision of future. Therefore learning is adapting of survival strategy with a number of interrelated consequences: they are not intrinsically motivated to master the curriculum. This is evidenced by the fact that they forget much of what they have learned a short time before. There are a growing number of students who lack interest in researching and thinking about their career choice, because they have not found their needs, values and goals. As a result, teachers are forced to invest a lot of effort in order to maintain a balanced student-teacher interaction. This interaction is reduced to *the exchange of knowledge on the order of how to obtain the learning outcomes*. Therefore 1/4 of students of secondary vocational education leave school without a diploma, because they do not know how to take responsibility and manage their own learning and to organize leisure time. It shows the importance of the role of the learning environment, where integrated career guidance and where through a thoughtful and systematic activities occurs dialogue between the student and their trusted adults; that in the center of dialogue is located meaning of students' experience about his life and career.

The dialogue' researchers K. Mittendorff, W. Jochems, F. Meijers and Mr P. Brok (2008) consist, that it is important to have a clear relationship between the student's experience with the world of work and his professional identity formation. The author proposes to use the method of dialogue as a solution to the above mentioned topical issues. This is due to various scientific findings that show the benefits of the use of dialogue, for example:
- dialogue guarantees the anticipation of change in thinking, action and behavior, since the participants jointly communicating and practically doing is generating new direct experience (Meijers, 2009);
- dialogue is an exchange process where two variables are interacting and performing two different tasks: *giving* and *asking* (Halliday, 1984, 3-11);

- dialogue occurs, if there are talks about the "my interest" and "your interests" (MacIntosh, Beech, 2012, 376), where hearing of the difference opinion leads to the formulation of question what must be discussed and solved (Walton, 1989, 176).

Dialogue in career guidance requires the same individual to permanently look for solutions of self life and career development in different ways, because in that way he/she can to access own resources. J. Lyons (1977, 66) writes that in the dialogue people are using their knowledge from their different social roles and status; their location in time and space; their degree of formality and the subject of negotiations. Besides, each participant of dialogue wants to receive a permanent feedback from other actors involved in the dialogue, which would guarantee the recipient's attention and favorable confirmation of perception about what been said, and that have desire to continue the dialogue. Moreover, constant feedback provides a study and the solution of the problem.

If dialogue is used as a method of in the educational environment, it is essential to take into account the following principles, defined by R. Flecha (2000, 137):

1) to be on an _equal_ footing, since the arguments based on the logic and proof, not on the authority);

2) to be _culturally intelligent_, it is mean, that each dialogue participant has possibility to confirm self intrinsic abilities, interests and abilities;

3) to be _transformative_, because dialogue should be changed attitudes towards the outside world and ourselves; 4) to be _instrumental_ - it improved capacities of dialogue' participants in the widest field;

5) to be able _to create meaning_ - in interaction with others establish personalized or collective meaning;

6) to be _joint and several_ – it means, dialogue participants must be united about the value of dialogue, despite the differing views; 7) it _promotes understanding of the equality of different_, because there is no more or less valuable views, there is only more or less justified opinions.

Describing the method from the pedagogical point of view (Pedagoģijas terminu..., 2000, 102) and extending it to a narrower view - the dialogue method, then can be considered that dialogue method is set of sequential cognition and exploration techniques which is used as the operating principle ("how to do") addressing to a studying of specific topic in order to achieve adequate results producing by target. But describing the dialogue method of career guidance in vocational secondary education, must take account the three sets of goals of career education and counseling (Karjeras izglītība, 2006, 8): 1) self-knowledge and self-development, 2) career exploration, and 3) career planning, whose process of achieving the student develop their career management competence. Consequently, it can be assumed that _dialogue method of career guidance in secondary vocational education is purposefully organized systematic communication between two or more persons, which focuses on self-exploration and self-development, career exploration and planning_. Dialogue method includes a variety of communication techniques, where each of them carries out its task in an orderly sequence so as to in a short time to achieve the best possible results.

For understanding of the necessity of dialogue methods in career guidance, it is important to mention a _principle of Reciprocity and Answers_, on which underlying a dialogue. M. Baker-Ohler and A. Holba (2009, 140) writes that reciprocity is characterized by interhumanity. Whereas people communicate through language that is appropriate to their existence, according to M. Buber (2014) findings, reciprocity is a source of interhumanity because it is designed to seek to address and response. Reciprocity calls each individual to meet life through the relationships and attitudes. Such a meeting requires that dialogue participants to see each other and both find the meaning of this reciprocity, which also has an individual's connection in dialogue; it recognizes that _self_ and _other_ are different dialogue partners, which focuses its attention not only to the self but to the scope of what they both create together. Both M. Buber (2014) and W. Isaacs (1999), believes that dialogue raises genius communicative relationship that is mutual and reciprocity, which makes communication an operational and alive with understanding that communication is a container in which the individual conveyed own truth of oneself to another dialogue participants. R. Anderson, L. A. Baxter and K. N. Cissna (2004, 2) believe that it refers to the specific detailed and qualitative communication processes, where are permitted and where there exist changes because the dialogue participants cannot predict what they will have to say, and thus they may surprise not just another, but also themselves.

Based on the current situation of students' career guidance in vocational secondary education environment, it must be emphasized most urgent conditions of use of dialogue methods - ensuring of the _active listening_ and _dialogue container_, where dialogue can flow freely.

According to the W. Isaacs, (1999), to allow for dialogue, the participants must be in _here and now_. It is difficult to do at once; attentive, active listening is acquired through the creation of new behavior, while to listening, expressing emotions and respecting others. Scientists J. Stewart, K. Zediker and S. Wittenborn (2006) believes that _active listening_ is a structured way of listening that requires peace of mind and empathic behavior. Being an active listener does not agree with the others view, because it is a way of approaching the problems (Rogers, Farson, 1987). So that, an active listening to be effective, it must be firmly based in basic attitude of dialogue' participants, where is demonstrated in a real mutual respect. Listening to create changes in the individual's attitudes toward themselves and others; it also changes their values and personal philosophy. People who have listened to this new and special way, becomes emotionally mature and open to their experience. When people listen carefully, they are listening to him with greater diligence for understanding what exactly they feel and think. They argue less and are more willing to accept other points of view. Besides providing more information than any other activity, listening constructed deep, positive relationships and constructively changes the listener's attitude. According to the C.R. Rogers and R. E. Farson (1987), active listening goal is to achieve positive changes in the human mind and actions. During his life, individual has learned to think for themselves in certain, very specific ways. On the one hand, these perceptions and assumptions about themselves tend to be both really and deceptively. Everyone has experience relevant to the way in which it is necessary to think about selves and it is also accepted. But there is much more difficult to accept experience that does not fit. For example, a student can be considered themselves to be incompetent and worthless. He/she may feel that he/she is doing his/her work ineptly despite to favourable environmental assessment. As long as he/she has such feelings for himself/herself, he denies any experience, it seems, are not satisfied with the same picture taken him/her. He/she is forced to defend himself or completely to deny the experience. The defense and denial of these experiences and the same taken picture usually leads to rigid behavior and create difficulties in personal self-putting in order. On the other hand, active listening, pose no threat to the individual's own image. He/she is able to study it, see what it is and accept his decision as to how realistic it is. And then he/she is in a position to change. But as long the individual is not ready to change, communication cannot be effective. It is therefore necessary to create an atmosphere of dialogue that is neither critical and evaluative nor moralizing. It must be equal, free and awareness accepting. Only in such a situation, the individual feels safe enough to incorporate new experiences and new values in his own behavior. C.R. Rogers and R. E. Farson (1987) believe that anyone who listens carefully with the understanding however, is the one who ultimately is likely to be heard. Active listening requires practice and changes to the individual basic attitudes. These changes come slowly and sometimes with considerable difficulty. In order to active listening be effective everyone must have a real interest in the speaker.

The second important condition is to provide a full-fledged _container of dialogue_ in which the dialogue can flow freely between and through us (Bohm, 2004). It is central to the concept of dialogue. According to the acknowledgment of W. Isaacs (1999, 244): "if no container, no dialogue". Container is capable to holding a dialogue. The dialogue in learning environments/classroom becomes a container when it participants feel heard and themselves knows how to listen carefully and to respect others, as well as can safely stopped assumptions, expressing their thoughts. A. C. Baker (2004, 695) uses the term "holding environment" to describe the space, in which opposing ideas can be explored, resolved, or embraced and in which the contributions of all participants are valued. In the dialogue, "people become as observers of their own thought" (Senge, 2006, 242) and gain an understanding, both individually and collectively, on how diverse tend to have people' opinions; here people are no longer in opposition, but participates in the construction of commonly accepted meaning which is able to grow and change.

May agree with view of J. Jermolajeva (1997, 58) that one of the preconditions of dialogical learning is _dialogical attitude_ as a complex phenomenon, where interacts the mutual relationships of dialogue' participants and their attitude towards the dialogue itself. J. Jermolajeva (1997, 58) recognizes that the nature of the attitude is variable and fickle. In its development can be seen in several lines: the first - is characterized by attitudes towards the other participants of dialogue. Its zero point is a desire to see other

as a mean for self expression (the other as a means), but amid a dialogue increasingly gets ability to see in another the other personality, by which is formed cooperation. The second axis or a line creates an attitude towards themselves. There zero point is the treatment of themselves as closed and constant personality (I as a means), but amid a dialogue, there is developing the ability to more deeply understand themselves (I, as an end in itself). The third axis is the attitude to the dialogue process. In this case, the zero point is utilitarian dialogue as a necessary recognition (dialogue as a tool). Away from it, is forming dialogue as a higher value-realization (dialogue as an end in itself). Thus dialogical attitude is mutual creative activity, during in which the two individuals in a free and open interaction are formed new mutual importance of revelation - dialogue space or container. Dialogue practitioners Mr. Drybrough and D. Goddin (2014) writes that as more powerful container, as will be more authentic and more effective dialogue. It is important to create a container that is clearly understandable to all its participants, because in such a way are forming the necessary conditions for the supportive conversations. Therefore practitioners and maintainers of dialogue methods have needed to work on the container. It is essential to identify the following main "pillars" for creating dialogue container: 1) to respect its own and other contributions, which are involved in the dialogue; 2) to suspend judgments; 3) use active listening in understanding others, to understand the rhythm and flow of what is being said; 4) to express self views through own authentic speech by voice. The dialogue space that is built on these pillars, is a challenging and obviously variable, because it ensures the existence of a dialogue. Context is everything in the dialogue - they are the actual and visible conditions involving a dialogue and that respects the participants of dialogue. Context affects the successful outcome of the dialogue and it is a question of how much work has been invested in the container building.

Conclusions

- Dialogue method for students' career guidance should be viewed as a set of cognitive and research techniques whose systematic use of students' self-knowledge, career exploration and planning, can ensure stable changes in their behaviour and attitude towards their acquiring of profession and future plans of career and life.
- Dialogue method is based on the principle of reciprocity and response, which are partly reflected in environment of the career guidance of vocational secondary school. This is because the operation of career guidance in vocational secondary education is a formal and superficial, where too little attention is devoted to the making meanings of student's own experience on his life and career.
- Dialogue method will give the expected results - positive changes in students' thinking, action and behavior, - if communication between the student and his career guidance' stakeholders have mutual credibility and true interest to deal with the problems. It will form deep and positive relationships and constructively will change both the student's thoughts and his actions in connection with acquisition of professional qualification and future career development.

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Structural Scheme of Motivation Theories for Career Development of the Unemployed

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Abstract: The problem of education and employment of the unemployed in Latvia is their insufficient motivation for learning. The development of the motivation of the unemployed is today's topicality in the continuing education and lifelong learning framework, so that training service would be available for the client in a flexible and timely manner. The aim of the research is to examine the theories of motivation and work out a theoretical justification for a structural scheme of motivation, which could be the basis for increasing the motivation for training and for the career development of the unemployed. The theoretical research was done in Latvia University of Agriculture and a survey of the unemployed was carried out at the State Employment Agency Jekabpils Department, questioning the unemployed about the reasons disturbing their motivation for learning. For strengthening the career development of the unemployed, there were studied the motivation theories that focus on values-based and active engagement in learning, the immediate usability of learning outcomes and assertiveness. According to the survey, the unemployed revealed that the main problem was their knowledge and skills mismatch with current labour market demand, thus showing a desire to improve their skills or get a new one using career education. However, the major obstacles were the disbelief of the unemployed in their own abilities, the lack of jobs and hence the lack of motivation to learn. The results of the research could be used in further education by learning facilitators in training the unemployed and as a contributing factor for increasing the motivation of the unemployed and extending opportunities for career development and integration into the labour market.

Keywords: motivation theories, the unemployed, career development, career education, adult education.

Introduction

Motivation is an internal "set of processes" – a hypothetical assumption. It is complicated, as it involves various processes and operations. It is individual – every individual has different needs and opinions on what is important. Motivation is oriented towards achieving goals. Goals (and goal mismatches) are considered to be the main stimuli that attract one's attention and cause actions, while the complicatedness and significance of goals are associated with the intensity of motivation. Goals are the key mechanism related to motivation. H.Gudjons gives a very precise inference (Gudjons, 1998): "Motivation is one of the crucial preconditions for learning".

Unfortunately, there is no integrated theory that includes completely all factors, processes and outcomes related to motivation. For example, a few theoretical approaches are rooted in the individual's endogenous factors (the cognitive and dispositional approaches), whereas other theories focus on the individual's exogenous factors (the status of unemployed, various intensifiers of responsive reactions) (Reņģe, 2007).

A few theoretical approaches are highly cognitive (self-regulation, expectancy theory, goal determination, self-motivation), while other ones have a distant connection with cognitive processes (genetic predisposition, emotions and affects) (Krumboltz, Levin, 2004; Ильин, 2002).

An alternative approach to every theory may certainly emerge. However, such alternative theories rarely contradict each other, as each theory focuses on a certain aspect of motivation. Contrasts in motivation theories can be identified reviewing the motivation theories based on exogenous and endogenous factors (Cilvēkresursi…, 2010).

The theories based on endogenous factors may be classified as rational, i.e. related to thinking and cognition – goal theories, self-control and expectancy theory – and as those that are not controlled at cognitive level. Rational motivation theories differ from each other in cognitive processes that emerge either before or during doing a job. In contrast, irrational theories may be divided into ones being mainly

situational and referring to mood, emotions and affects and ones having almost no connection with the nature of situation – needs, genes and personality).

The motivation theories based on exogenous factors focus on situational aspects influencing the extent of efforts an individual want to make when doing a job. The theoretical approach of external stimuli may be divided into a situation that is based on the content of work (labour content theories) and a situation being mostly affected by situational social aspects. Social aspects are different and mutually interact very much. A group's culture and norms are created to motivate people to work based on their expectations, whereas employee expectations relate to a fair reward for the job done. Therefore, it is understandable that external processes make a huge impact on endogenous factors (Cilvēkresursi…, 2010; Маркова, Матис, Орлов, 1990; Маслоу, 2006).

In order that the unemployed can successfully integrate into the labour market – through learning, self-development and active participation in the learning process both individually and collectively, they need motivation, as individuals of different ages have their own opinion on qualifying for a job and on education. The motivation theories being useful for the career education and career development of the unemployed are as follows: the Self-determination Theory of E.L. Deci and R.M. Ryan (Deci, Ryan, 1985) (self-guidance, joint learning, active engagement in learning, immediate usability of learning outcomes and a supportive emotional environment); the Motivational Systems Theory of B. Rizhov (Рыжов, 2010) (at micro level: a social system, an external environment, in the social system's centre – an active informing structure; at macro level: the knowledge of a socium about the world and oneself); the Theory of P.Becker (Becker, 1991) (exogenous factors, endogenous factors and lifestyle); the Two-factor Theory of F.Herzberg (Herzberg, 1974; Herzberg, Mausner, 1959) (motivators, hygienic factors); the Theory of J. Keller (Keller, 2010) (attention, suitability, self-confidence and satisfaction).

The problem of education and employment of the unemployed in Latvia is their insufficient motivation for learning. The development of the motivation of the unemployed is today's topicality in the continuing education and lifelong learning framework, so that training service would be available for the client in a flexible and timely manner.

The aim of the research is to examine the theories of motivation and work out a theoretical justification for a structural scheme of motivation, which could be the basis for increasing the motivation for training and for the career development of the unemployed.

Methodology

The theoretical research was done in Latvia University of Agriculture and a survey of the unemployed was carried out at the State Employment Agency (SEA) Jekabpils Department, questioning the unemployed about the reasons disturbing their motivation for learning. For strengthening the career development of the unemployed, there were studied the motivation theories of Keller J.M. (Keller, 1983, Keller, 2010), Herzberg F. (Herzberg, Mausner, 1959; Herzberg, 1974; Herzberg's Two-Factor Theory…, 2015; Herzberg's Motivators, 2015), Deci E.L. and Ryan R.M. (Deci, Ryan, 1985), Ryzhov B.N. (Рыжов, 2004, 2010), Becker P. (Becker, 1991) and career development theories that focus on values-based and active engagement in learning, the immediate usability of learning outcomes and assertiveness, which is useful for career education. A structural scheme (Figure 1) of motivation theories for responsible career development of the unemployed was worked out.

The survey on motivation for learning was conducted at the State Employment Agency Jekabpils Department in the first half of 2014, questioning the unemployed about what factors and personal traits hinder them from finding a job and what their contribution was and what they did themselves to find a job. The survey involved 100 respondents. They were the unemployed being registered with the State Employment Agency. Data analyses were based on percentage calculations. On the April 30, 2014 in Jekabpils area were registered 2416 unemployed. 1171 of these were registered as unemployed in Jekabpils city and 1245 unemployed were registered in the surrounding of Jekabpils: in Akniste region - 156, in Jekabpils region - 274, in Krustpils region – 359, in Viesite region - 243, in Sala region - 213. (Bezdarba statistika, 2014). In the survey there were involved the unemployed in the following age groups 25-35 years (19%), 36-46 years (33,3%), 50-61 years (42,9%), covering almost all the registered

unemployed age groups. The age group 15-24 years did not participate in the survey. 61.9% of participated respondents in the survey were women, and 38.1% were men.

Results and discussion

A number of research studies have proven that the autonomous kinds of intrinsic and extrinsic motivation contribute to long-term engagement in learning in all contexts of education, including adult education. One of the key theories that are employed in research on motivation is Self-determination Theory (Deci, Ryan, 1985, cited by Demirol, Steiner, 2009). The theory assumes the tendency to be curious, to cognise one's environment and to be interested in learning and in improving one's knowledge is an inherited trait. Yet, external control is introduced in the most organised learning environment, especially in the situations with learning in groups, which can negatively influence the psychological processes related to high-quality, intense learning. Evidence shows that the conditions that support the autonomy, competences and experience in mutual obligations of learners contribute to the highest motivation and engagement, including the self-regulation of learning, improved learning outcomes, persistence in learning, creativity and wellbeing. The motivation factors that are important in the developed innovative techniques, strategies or methods and can be incorporated in several self-determination pillars are as follows:

- self-guidance (autonomy);
- joint learning (autonomy and interrelationships);
- active engagement in learning (interrelationships);
- immediate usability of learning outcomes (competence);
- recognition of the achievements of learners (competence, interrelationships);
- a supportive emotional environment (interrelationships) (Deci, Ryan, 1985; Demirol, Steiner, 2009).

The basic idea of **F.Herzberg's** Two-factor Theory is as follows: one of the motivators is enough to make an individual satisfied with the job; yet, at the same time, if one of the hygienic factors is lacked – the individual can feel discomfort and dissatisfaction which, in its turn, influences his/her satisfaction on the whole. (Table 1, Figure 1). If all the hygienic factors are guaranteed to the individual at the job, he/she will be satisfied; yet, some motivator is needed in order that the job can provide real satisfaction and joy. (Herzberg, Mausner, 1959; Herzberg, 1974, Praude, Beļčikovs, 2001; Herzberg's Motivators, 2015).

Table 1

F.Herzberg's attitudinal factors

(Herzberg, Mausner, 1959; Herzberg, 1974, Praude, Beļčikovs, 2001)

No	I. Motivators	II. Hygienic factors
	Factors that positively affect employees' satisfaction with their job	**Factors that avoid employees' dissatisfaction with their job**
1	Success at the job	Job retention guarantees
2	Recognition of achievements	Social status
3	Work process as such	Organisation's operational policies
4	Degree of responsibility	Working conditions
5	Opportunities for growth, career	Direct supervisor's permission
6	Professional growth	Private life
7		Relationships among employees
8		Wage
9		Relationships with subordinates

F.Herzberg classifies all the factors that motivate individuals to work into two categories:

- <u>MOTIVATIONAL factors</u> (associated with the specifics of the job), which positively affect employees' satisfaction with their job: success at the job, the recognition of achievements, the work process, the degree of responsibility, opportunities for growth, the career and professional growth.

- HYGIENIC factors (necessary to maintain human working abilities), which avoid employees' dissatisfaction with their job: job retention guarantees, social status, the organisation's performance, working conditions, the attitude of the direct manager, private life, relationships among employees, wages, relationships with subordinates (Herzberg's Two-Factor Theory..., 2015).
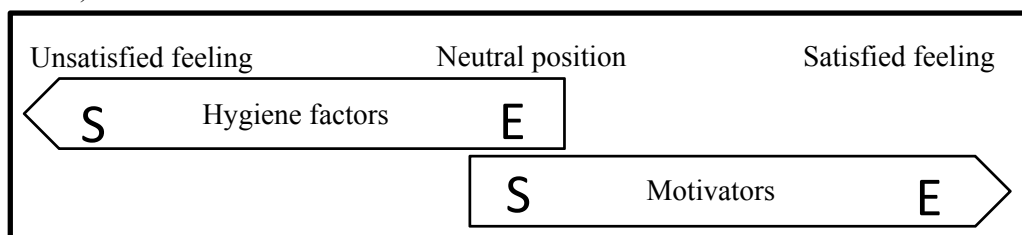

Figure 1. F.Herzberg's two-factor model, E-existence, S-shortage
(Herzberg, Mausner, 1959, Praude, Beļčikovs, 2001; Herzberg's Two-Factor Theory…, 2015)**.**

Motivation depends on how individuals self-organise themselves. If individuals categorise themselves at individual level, they will be motivated by their personal identity. If categorisation takes place at social level, strengthening their social identity in a group will be important to individuals. A very important factor is the fact whether an individual works in a team as a member of it or individually (Reņģe, 2007). One of the key factors affecting human behaviour and motivation is the social factor. Social influence on individuals may be identified during learning. Researchers believe that individuals live in a social environment. If the social environment in which individuals live is full of hate and pain, they lose motivation and their behaviour worsens. In contrast, if individuals live in a social environment full of love and hierarchy, their motivation increases and their behaviour improves (Aronson, Wilson, 2009).

John Keller's ARCS Model of Motivational Design involves four steps for promoting and sustaining motivation in the learning process: attention, relevance, confidence, satisfaction (ARCS) (Keller, 1983, Keller, 2010). According to the model, conditions contributing to adult learning motivation become clear (Table 2):

- - *attention*: a contribution that motivates them to be aware of the gains made during the learning process;
- - *relevance*: the usability of self-assessment (gains and losses) in real life situations;
- - *confidence*: getting feedback on the usefulness of learning and the feeling of evaluation of learning achievements;
- - *satisfaction*: the development of the feeling of achievement or gain, which motivates to keep learning.

Table 2

Motivation terms and strategies (Keller, 1987**)**

Nr.	Motivation term	Motivation strategies		
1.	**Attention**	Inadequacy Mood	Concreteness Demand	Changeableness Participation
2.	**Relevance**	Experience Coordination	Value Choice	Modeling Usefulness
3.	**Confidence**	Learning- requirements	Obstacle Competence	Chances Self-confidence
4.	**Satisfaction**	Consequences Negative influence	Gains Planning	Positive results

Boris Rizhov's Motivational Systems Theory involves the Biological Systems Theory and the Social Systems Theory, which explain an individual's motivational base. The functioning of biological systems is the activity of life, which contributes to the systems' active interaction with the external environment.
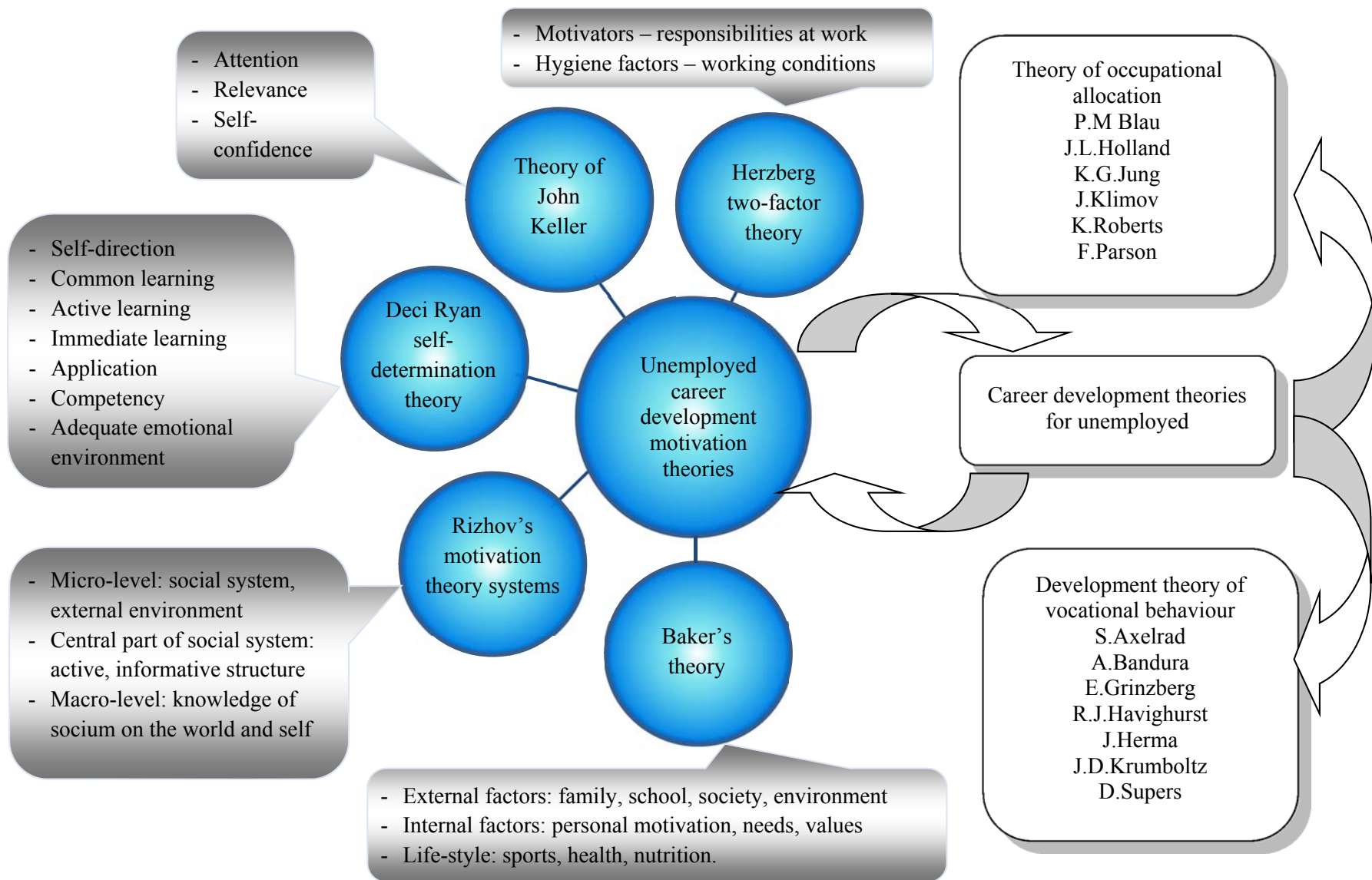
- Attention
- Relevance
- Self-confidence

- Motivators – responsibilities at work
- Hygiene factors – working conditions

Theory of occupational allocation
P.M Blau
J.L.Holland
K.G.Jung
J.Klimov
K.Roberts
F.Parson

- Self-direction
- Common learning
- Active learning
- Immediate learning
- Application
- Competency
- Adequate emotional environment

Theory of John Keller

Herzberg two-factor theory

Deci Ryan self-determination theory

Unemployed career development motivation theories

Career development theories for unemployed

Rizhov's motivation theory systems

Baker's theory

Development theory of vocational behaviour
S.Axelrad
A.Bandura
E.Grinzberg
R.J.Havighurst
J.Herma
J.D.Krumboltz
D.Supers

- Micro-level: social system, external environment
- Central part of social system: active, informative structure
- Macro-level: knowledge of socium on the world and self

- External factors: family, school, society, environment
- Internal factors: personal motivation, needs, values
- Life-style: sports, health, nutrition.

Figure 3. Structural scheme of motivation theories for career development of the unemployed. (authors' construction)

Every biological system's life is based on a certain cycle that involves intensive and extensive development phases.

At the level of an individual, a biological system develops as follows: the individual's life activities are a process of interrelated special mechanisms that ensure the evolution based on his/her characteristic cycle. Higher level mechanisms of biological systems acquire a more universal nature, becoming behavioral mechanisms oriented towards particular individuals. The physiological manifestation of such mechanisms involves neurological reactions to changes in the external environment. Great contributions to research on instincts have been made by such scientists as C.Darwin, W.James, W.McDougall and K.Lorenz, in later years E.Gess and R.Boiss (Рыжов, 2004).

The social kind of a systemic organization may be divided into the following hierarchal levels, analogues of biological systems:

- *at micro-level*, a social system represents any information about the external environment, an understanding of the subject that is alienated from the subject itself;
- *the social system's central level* is composed of a personality – an active informing structure – as well as involves its transformation into material objects or structures of other personalities; besides, cooperation among personalities can be both direct and indirect by means of another individual, a book or other information sources;
- *at macro-level*, a socium's knowledge about the world and him/herself (Рыжов, 2010).

P.Becker believes that three factor groups influence one's self-feeling. First, exogenous factors: family, school and social environment. Second, endogenous factors: personality's motivation, needs and values; and, third, the lifestyle of a particular individual: sport activities, overall health condition, diet, etc. The mentioned factors are dynamic and closely interrelated. P.Becker writes about two kinds of self-feeling: actual self-feeling that may be characterised by current, momentary feelings and lasting self-feeling as relatively stable characteristics (Figure 2).
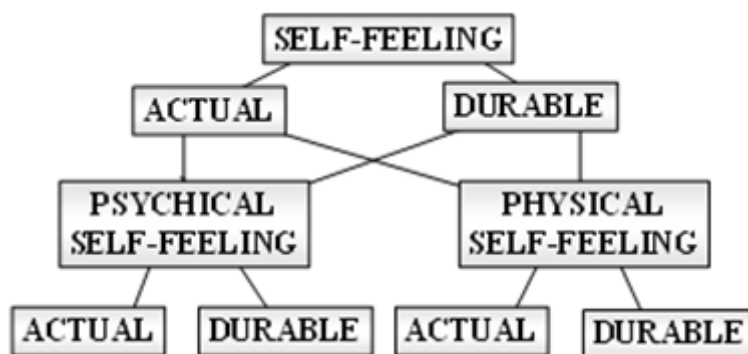
Figure 2. Structural model of self-feeling (Becker, 1991, cited by Steinberga, 1997).

Based on long-term work experience and work with the unemployed, the authors have developed a structural scheme of motivation theories for the career education and career development of the unemployed (Figure 3), which involves the motivation theories selected by the authors: the Self-determination Theory of E.L. Deci and R.M. Ryan (Deci, Ryan, 1985), the Motivational Systems Theory of B. Rizhov (Рыжов, 2010), the Theory of P.Becker (Becker, 1991), the Two-factor Theory of F.Herzberg (Herzberg, Mausner, 1959) and the Theory of J. Keller (Keller, 2010) and career development theories: the Theory of Occupational Allocation of P.M Blau, J.L.Holland, K.G.Jung, K.Roberts, J.Klimov, F.Parson, (Blau, 1985; Holland, 1994, Jung, 2006; Roberts, 1993; Климов, 1996; Parson, 1909; Osipow, Fitzgerald, 1996;) and the Development Theory of Vocational Behaviour of A.Bandura, R.J.Havighurst, E.Grinzberg, S.Axelrad, J.Herma, D.Supers, J.D.Krumboltz, (Bandura, 1997; Havighurst, 1972; Ginzberg, Ginsburg, Axelrad, Herma, 1951; Super, 1980; Osipow, Fitzgerald, 1996; Krumboltz, Levin, 2004;). The authors regard the theories as very important for motivating the unemployed to further educate themselves, which is their contribution to their career development.

During adulthood, the key kind of activity is employment, which makes a developing effect on the personality, along with such factors as age and education. To have a job during the entire period of active life, professional competence enhancement courses have to be purposefully held, in which the

values included in the content of training – knowledge and skills – turn into the gains of the unemployed, thus increasing the motivation of the unemployed for improving their career education and developing their careers. When making labour market policies, important aspects have to be taken into account, such as matching the education system with labour market demands by taking into consideration the demand for labour by profession in the future and by developing lifelong learning. Developing self-motivation, raising the qualification and better performance are a solution for the unemployed. The rate of registered unemployment in Latvia in the period 2005-2013 is presented in Figure 4. It shows that the unemployment rate gradually declined, which was a positive trend. However, after comparing the unemployment rates for the Baltic States (Table 3), one can find that the situation in our neighbouring country – Estonia – was the best; the unemployment rate was the lowest. So, one has to learn from the neighbours how to achieve it.

Table3

Unemployment rates in the Baltic States in the period 2011-2014 (%).

Year	Latvia	Lithuania	Estonia
2011	16.2	15.4	12.3
2012	15.0	13.4	10.0
2013	11.9	11.8	8.6
2014	10.8	10.7	7.4

Source: Eurostat data (2011.-2014.) Code:[tsdec450]   15-74 years old (Eurostat, 2015)

The current trend in Latvia shows that there are individuals among the unemployed whose knowledge and skills do not match labour-market demands. More than 20 percent of the unemployed are youth aged 15-24, while the second largest group is the long-term unemployed. (Reģistrētais bezdarba…, 2015). However, in the modern society, the development and wellbeing of individuals become increasingly dependent on knowledge and education, as the labour market demands educated employees of high-qualification who can use the latest information technologies. This ability is a significant factor in any industry of the national economy for economic growth and employment in the country. After Latvia joined the European Union, funding was allocated for increasing employment. To achieve it, it was planned to raise the qualifications of the unemployed in demanded professions, to offer training placements and subsidised jobs for target groups of the unemployed as well as to train individuals to start up a business and enhance job-seeker training programmes.

In order that individuals can integrate into the labour market, they need an education, knowledge and skills that match market demands. Presently, a lot of individuals – youth, preretirement-age individuals and individuals with special needs are registered as unemployed or do low-wage jobs owing to their insufficient education and low qualification.

Latvia's employment policy is closely associated with that of the European Union. The Treaty of the European Union sets a goal to contribute to economic and social development and high employment.

It is well seen if comparing the indicators of Latvia and the other Baltic States. For example, the The National Reform Programme (NRP) of Latvia envisages an increase in the proportion of university students only after 2020 "when there is a better demographic situation and a higher purchasing power of the population". For the period until 2020, it forecasts fluctuations of the proportion of individuals who have acquired higher education from 35% in 2010 to 38% in 2015, followed by a decrease to 34-36% in 2020. If defined like this, the target set by the NRP of Latvia may not be regarded as a target as such – it is only the reflection of a long-term forecast (Latvijas nacionālā…. 2010).

The crucial and important role of human resources is especially stressed in reforming the labour market:
- the association between human resources and vacant jobs has to be enhanced through reducing various internal and external barriers and fostering labour force mobility;
- more individuals have to be integrated into the labour market through introducing various initiatives, integrating various population groups into the labour market and retaining jobs for preretirement and older individuals and those who have just started working;
- the adaptation capability of the labour market has to be increased, considering the interest and needs of both employers and employees;

- comprehensive lifelong learning, which provides training throughout lifetime, is necessary, so that individuals can adapt to the fast changes and innovations in the labour market.

The authors conducted a survey of the unemployed at the Jekabpils Department of the State Employment Agency regarding the reasons obstructing their motivation for education. The respondents had to answer a number of questions, yet, the present paper analysed only the most important ones.
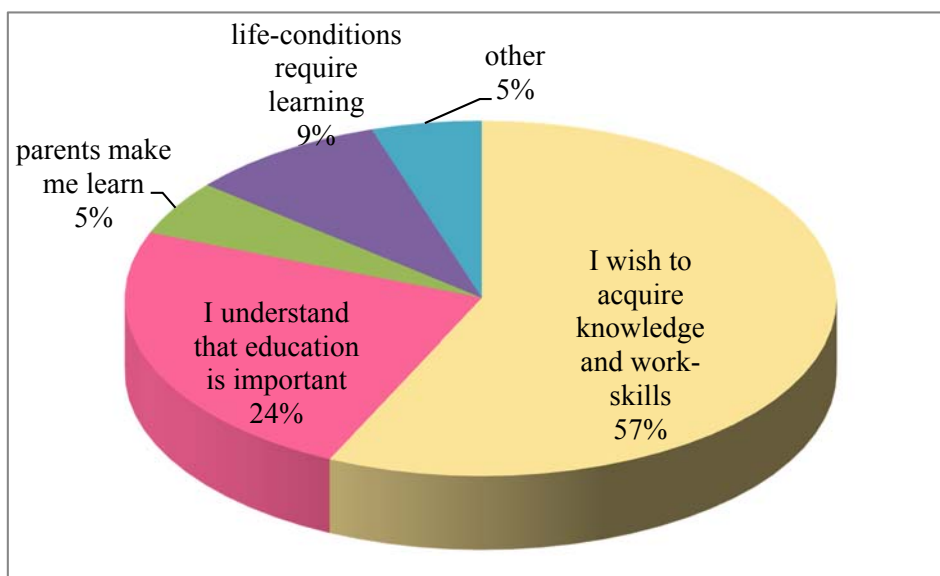

Figure 4. Respondents' opinions on their motivation for learning.

Of the respondents, 57% admitted that they wished to acquire new knowledge and skills needed for a job, 24% understood that education was necessary and important in their career growth, 9% noted that their life circumstances made them learn and 5% said that their parents recommended them to keep learning (Figure 4).
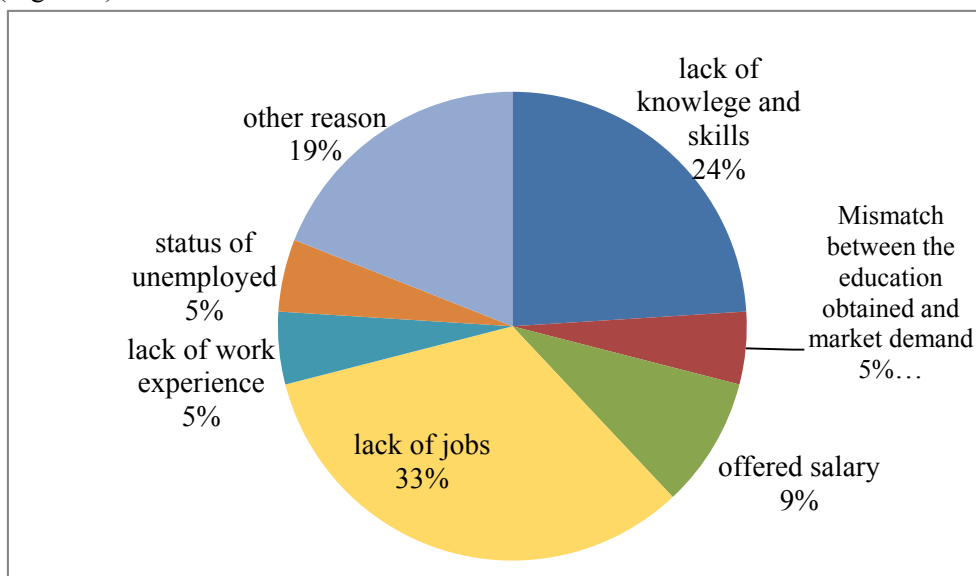
Figure 5. Respondents' opinions on exogenous factors preventing them from finding a job (data are based on survey questionnaires).

In general, one can conclude that the majority of unemployed individuals, however, were aware of the significance of knowledge in the successful development of their career. Of the respondents, 33% admitted that simply the lack of jobs hindered them to find a job, 24% said they lacked knowledge and skills to successfully find a job, 9% were not satisfied with the wage offered, the education of 5% respondents did not meet the job requirements, 5% lacked work experience, it seemed to 5% respondents

that the reason was their status of unemployed and 19% specified other reasons (Figure 5). On the whole, one can conclude that the unemployed were aware of the role of knowledge and skills in successfully finding a job.
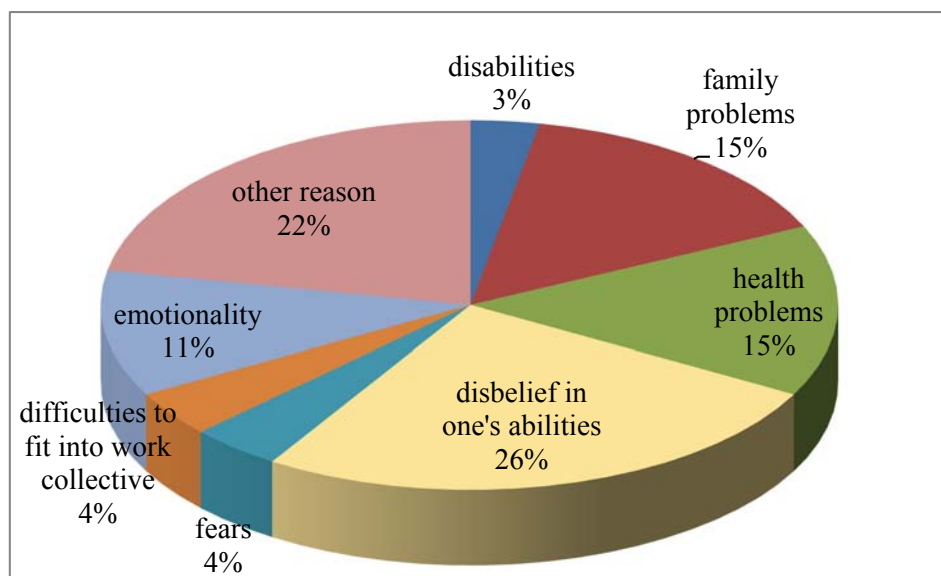
Figure 6. Respondents' opinions on what personal traits and problems prevented them from finding a job (data are based on survey questionnaires).
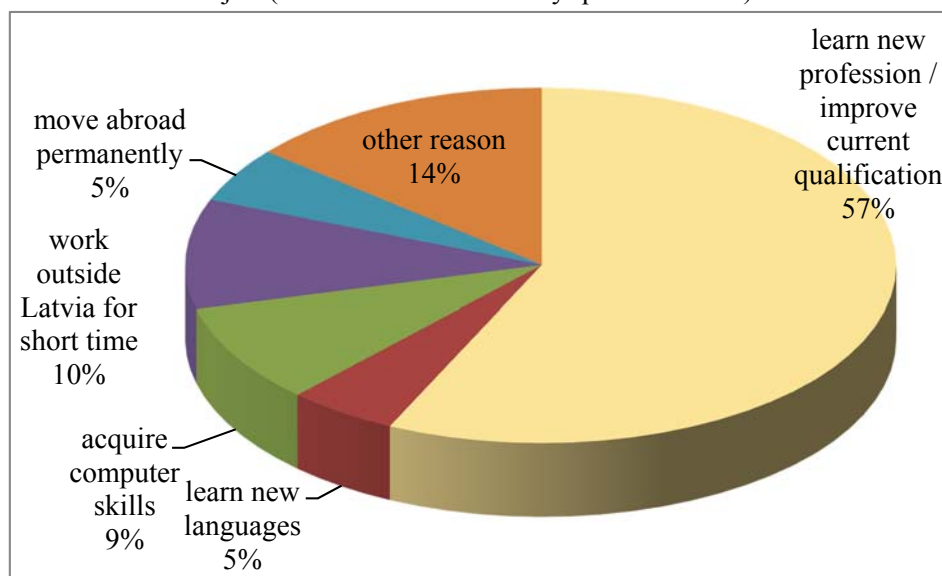
Figure 7. Respondents' opinions on how to act to get an appropriate job (data are based on survey questionnaires).

The respondents involved in the survey admitted that they could not find a job mainly because of their disbelief in their abilities (26%), health problems (15%), family problems (15%), the problem of integrating into the work team (4%) and a disability (3%) (Figure 6). The unemployed were asked to think about how to better act to successfully find a job: 57% admitted that they needed to learn a new profession or to raise their current qualification, 10% thought that working abroad could help solve the situation in a short-term, 5% thought about moving abroad for permanent residence, 9% preferred to learn computer skills and 5% wished to learn a new foreign language (Figure 7). The dominant trend in the respondents' opinions was the raising of their qualification and the learning of new professions.

Motivation is one of the key sources of behaviour of an individual. To understand why individuals behave the way they do, motivation theories have to be comprehended. Motivation is not the only or main impulse that generates behaviour, yet, motivation is a complex of inducements: needs, motives, ideals, goals, value orientations, etc. All these inducements are interrelated and compose a system that

determines the behaviour of an individual and gives it direction and intensity. Motivation performs a number of functions: it generates behaviour, conducts and organises it and gives it a personal meaning and role. Therefore, the factors that hinder the development of positive motivation have to be researched. Such factors can relate to confusion due to the abundance of information and opportunities as well as to the unawareness of the meaning of learning and of one's own values and needs and to an inappropriate study programme or methodology or inappropriate teaching aids. In addition, a decline in motivation when becoming unemployed might be associated with complicated family circumstances.

Research on the motivation of every particular individual, which allows predicting his/her motivation, is an important issue that is continuously tackled in the whole world; however, its solutions are diverse. Motivation mechanisms are different in the individual him/herself and among individuals. Besides, motivation interacts with the ability to generate behaviour and demonstrate any achievement. Motivation helps us to keep our attention on something certain and generates the ability to make efforts. Individuals work more and better if being motivated. The outcome of motivation is persistence. The higher the level of motivation is, the longer the individual can withstand "coercion" to achieve a result. The outcome of motivation is embedded in individual strategies and behavioral pathways that are designed to achieve goals.

The authors' proposals aimed at enhancing lifelong learning programmes for certain target groups, avoiding the risk of social exclusion, are as follows: increasing the accessibility of adults to lifelong learning, eliminating the possibilities for exclusion from the process of learning, balancing the demand for and supply of the labour market by defining priority professions to be learnt.

Latvia's responsible institutions – ministries, the SEA, etc. – are advised to consider the ways how to increase the proportion of economically active population in future, designing and enhancing lifelong learning programmes and ensuring that the economically active period in every individual's life is as long as possible, reaching an employment rate of 73% until 2020 in order to reduce unemployment.

In future the authors intend to carry out a research study in order to contribute to developing a lifelong learning model and later approbating it for the purposes of increasing the motivation of the unemployed, developing their careers and reducing unemployment in the context of lifelong learning.

Conclusions

- From year to year, the unemployment rate gradually declined in all the Baltic States, which was a positive trend. In 2014, the unemployment rate in Latvia was 10.8%, in Lithuania 10.7% and in Estonia 7.4%. In the neighbouring Estonia this indicator was the lowest. Latvia has opportunities to improve this indicator by working on the unemployed, examining potential job offers and, accordingly, expanding opportunities for lifelong education.

- The theoretically justified structural scheme of motivation theories for the career development of the unemployed includes the theories selected by the authors: the Self-determination Theory of E.L. Deci and R.M. Ryan, the Motivational Systems Theory of B. Rizhov, the Theory of P.Becker, the Two-factor Theory of F.Herzberg and the Theory of J. Keller, in relation with Career Development Theories, regarding them as very important for motivating the unemployed to keep educating themselves and for real work on their career development. This structural scheme will be included in the didactical lifelong learning model that is planned to be developed for the process of educating the unemployed at the Jekabpils Department of the State Employment Agency. As a part of career education it is necessary for contributing to the self-guidance and self-confidence of the unemployed, the matching of the unemployed with the labour environment and enhancing their competences in their profession, which would result in their finding an appropriate job and in their integration in the social environment.

- According to the survey, the unemployed revealed that the main problem was their knowledge and skills mismatch with the current labour market demand, thus showing a desire to improve ftheir skills or get a new one (57%). However, the major obstacles were the disbelief of the unemployed in their own abilities (26%), the lack of jobs (33%) and hence the lack of motivation to learn.

- The usage of the structural scheme of motivation theories for the career development of the unemployed could promote the use of educational opportunities for them. State employment

Agency could provide adequate support for the unemployed to participate in training and professional development process, thereby contributing to unemployed successful transition from the educational process to the labor market. Such support of education could be able to react more quickly to changes in the labor market and to offer a specific learning directly to the unemployed related with the needs of the economic.

- The results of the research could be used in further education by learning facilitators in training the unemployed and as a contributing factor for increasing the motivation of the unemployed and extending opportunities for career development and integration into the labour market.

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Comparative Analysis of the Career Guidance Needs in the Baltic Countries

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Abstract: In the article are analysed results from the survey on the career guidance and counselling conducted in the framework of Erasmus+ Strategic partnership project "Information and Communication Technology for Romanian Career Counselling (ICT 4 RoCc)". The problem has been approached by analysing and evaluating career guidance services in project partners' countries and establishing the pupils' needs in the area of career counselling as well as available instrument to satisfy those needs. The questionnaire was designed to summarize 7-12 grade pupils' opinion about counselling and vocational guidance. It consisted of four diagnostic blocks: availability of the career counselling services, students' needs for the successful counselling and vocational guidance, information suitable for vocational career guidance and information about the respondents. In the study is used self-assessment method, so the results are based on respondents' views. The analysis of youth unemployment in the Baltic countries is also given in order to underline the need and usefulness of career guidance and counselling. According to the findings in Latvia special attention should be paid to the outcome of the residence: pupils from rural areas more often have access to career counselling services by means of the school counsellor and they more often need counselling from a person specialized in this field; pupils from urban areas more often have plans for personal development or a career plan and they prefer online access to scientific information about vocational guidance. The results show that career guidance and counselling between the Baltic States are more developed in Estonia.

Keywords: employment, career counselling, career guidance, consultations, school career education.

Introduction

The 21st century is characterized by globalization and continuous changes in the work environment and with fewer certainties, openness and flexibility. That is why career guidance and counselling are becoming topical issues.

Careers guidance is a process that aims to provide individuals with a clearer understanding of themselves and their potential for future career development, help people to clarify their goals for the future, assess their career development needs at different stages in their life, understand the actual process of choosing a career and take appropriate measures to implement these objectives (Ali, Graham, 1996).

Career counselling aim is to support people in making and implementing informed career decisions. Career counselling includes all counselling activities related to (Zunker, 2006):
1. career choice on a lifetime. In the career counselling process, all matters regarding the individual needs (including work, family and personal preoccupations), are recognized as an integral part of career decision making and planning;
2. the inadequacy of employment, mental health issues, stress reduction and development programs that improve work skills, interpersonal relations, flexibility, adaptability, and other development programs leading to self-agent.

The potential effects of career guidance can be thought of at the individual, organisational and societal levels. At the individual level, potential benefits could result from people being better able to manage their choices of learning and work, and to maximise their potential. At the organizational level, potential benefits could flow to education and training providers if learners were assisted to identify and enter learning programmes which meet their needs and aspirations. And they could flow to employers if career guidance resulted in a supply of job applicants whose talents and motivations were matched to employers' requirements. Benefits could result at the societal level if career guidance leads to greater efficiency in the allocation of human resources. Social benefits could also result if career guidance helped to widen access to learning and work opportunities (both helping people to avoid social exclusion and helping the excluded to gain access to learning and work), thus enhancing social equity (Career Guidance…, 2004).

It should be noted that the career guidance and counselling development and implementation has been intensified also in educational institutions. Planned and high-quality career education is needed to help young people and their parents understand the changes in education and employment, the job market in a changing environment. European Council (Council Recommendation …, 2011) recommends strengthening guidance and counselling support for students' career choices, transitions within education or from education to employment. It reduces poor decision making based on false expectations or insufficient information. It helps young people to make choices which meet their ambitions, personal interests and talents.

European Commission (Reducing early school leaving …, 2013) is stating that high quality, up-to-date guidance made available at an early stage is essential for providing young people with the information they need to make informed education and career choices. Helping young people understand their own strengths, talents, different study options and employment prospects is essential. Guidance could be provided through interactive methods (mentoring, coaching, one-to-one guidance, work placements) and through online services.

European Commission (Redecker, Leis, 2011) anticipates that, for the future it is important to ensure that skills, interests and preferences are respected and addressed to keep learners motivated and engaged in employment. Targeted and personalised support and guidance is needed to improve employability.

In order to improve ability to manage young people choices of learning and work, as well as enhancing social equity, the survey on career counselling was conducted in Romania, Cyprus, Latvia, Lithuania and Estonia in the framework of Erasmus+ Strategic partnership project "Information and Communication Technology for Romanian Career Counselling (ICT 4 RoCc)". In this article it is made comparative analysis of the pupils' responses of the Baltic countries (Latvia, Lithuania, Estonia).

The problem has been approached by analysing and evaluating career guidance services in project partners' countries and establishing the pupils' needs in the area of career counselling as well as available instrument to satisfy those needs. Evaluating the above-mentioned conditions, in the article also is carried out the analysis of youth unemployment in the Baltic countries in order to underline the need and usefulness of career guidance and counselling.

Methodology

The research methodology established based on the circumstances described above. The research consists of two parts: the comparative analysis of the school pupils' (grade VII – XII) survey results and investigation of the youth employment rate (from the EUROSTAT database).

The school pupils' questionnaire included four diagnostic blocks: availability of the career counselling services, students' needs for the successful counselling and vocational guidance, information suitable for vocational career guidance and information about the respondents. Each diagnostic block contains several statements, which where designed based on career guidance systems in partners' countries. In the diagnostic part of the questionnaire form, there were 6 selection type questions and one question of Likert Scale type presented to the respondents.

The survey includes 474 cases: Latvia - 272, Estonia – 101 and Lithuania – 100.

In the study it is used self-assessment method, so the results are based on respondents' views. It shall be noticed that the research is a case study and it highlights only the main directions of career guidance needs for the current situation, however it does not foresee any requirements, which are raised by the rapid development of social area and technologies.

It should be noted that such studies have not been carried out in the Baltic countries. This is the first study regarding career counselling and guidance needs.

Results and discussion

Career services in the Baltic countries are implemented through three kinds of interrelated measures:
- career education – to help young people raise their self-awareness and the understanding of the opportunity structure (learning and work), and acquire skills and attitudes to enter and succeed in the modern world of work;
- career counselling – to support people in making and implementing informed career decisions;
- career information – to provide well-structured information about education, labour market and professions, and links between them.

Career guidance in the Baltic countries is shared between the Education and Labour sectors. From primary through upper-secondary education both general and vocational schools provide career education – measures integrated in the education process in order to ensure the acquisition and development of career management skills of educates, which include being aware of one's interests, abilities and opportunities for selecting the direction of further education and professional career. Education standards determine that one of the main goals of education is to prepare students to make a conscious career choice. Career management skills are integrated into subject standards as learning outcomes. In accordance with Law on Education career management skills provide structured ways to compile, analyse synthesize and organize information related to one's self, education and employment and enabling one to make and implement decisions about the choice of education and/ or occupation, but career development support – an aggregate of measures, which includes access to information, career education and individual consultations for educates for determination and planning of career objectives, making a choice in relation to education and work (Izglītības likums, 1998).

The research shows that in all the Baltic States are used several methodologies for work with young people:
- professional interests' investigation, determination of the professional scope and choice;
- investigation of the thought process of individual peculiarities and individual nonverbal intelligence aspects (imaginative thinking, spatial perception and attention) as well as clarification of the nature of intellect;
- determination of the individual psychological properties of the personality as well as communication strategies;
- motivational clarification with regard to career planning.

Career counselling is the main method that is used in the Baltic States in order to provide support for future career choices (Table 1).

Table 1

Career counselling types

Individual consultations		Group consultations	
Professional	Diagnostic	Career	Career information
☐professional aptitude investigation ☐professions alternative search ☐individual career plan preparation ☐job interview preparation ☐assistance in completing CV and cover letter	☐professional tendencies determination ☐thinking peculiarities investigation ☐working capacity study ☐ability to work compliance with professional ambitions	☐career challenges ☐career development problem solving ☐information on education and career development ☐research on the professional competence correlation with the labour market	☐information about the labour market current issues ☐profession standards ☐educational opportunities (in their own country and in EU)

To analyse career guidance services in the Baltic countries pupils where asked about taking part in a counselling activities for choosing their career. Results (Figure 1) show that almost half of the Baltic

States VII-XII grade pupils have not taken part (or thinks that have not taken) in career counselling activities. Group activities are the most popular in Latvia and Lithuania (accordingly 42% and 48%). Situation is a little different in Estonia where pupils participate not only in group, but also in individual activities (accordingly 32% and 23%).

Analysing research results taking into account gender aspect, boys more often have taken part in a counselling activities for choosing their career than girls. Girls actively participate in group counselling.

Total 38% of pupils in the Baltic countries think that they do not have access to career counselling services. In Latvia 42%, Lithuania 57% and Estonia 36% of the pupils have access to services by means of the school counsellor and accordingly 18%, 8% and 30% by means of a specialized counsellor in vocational guidance.
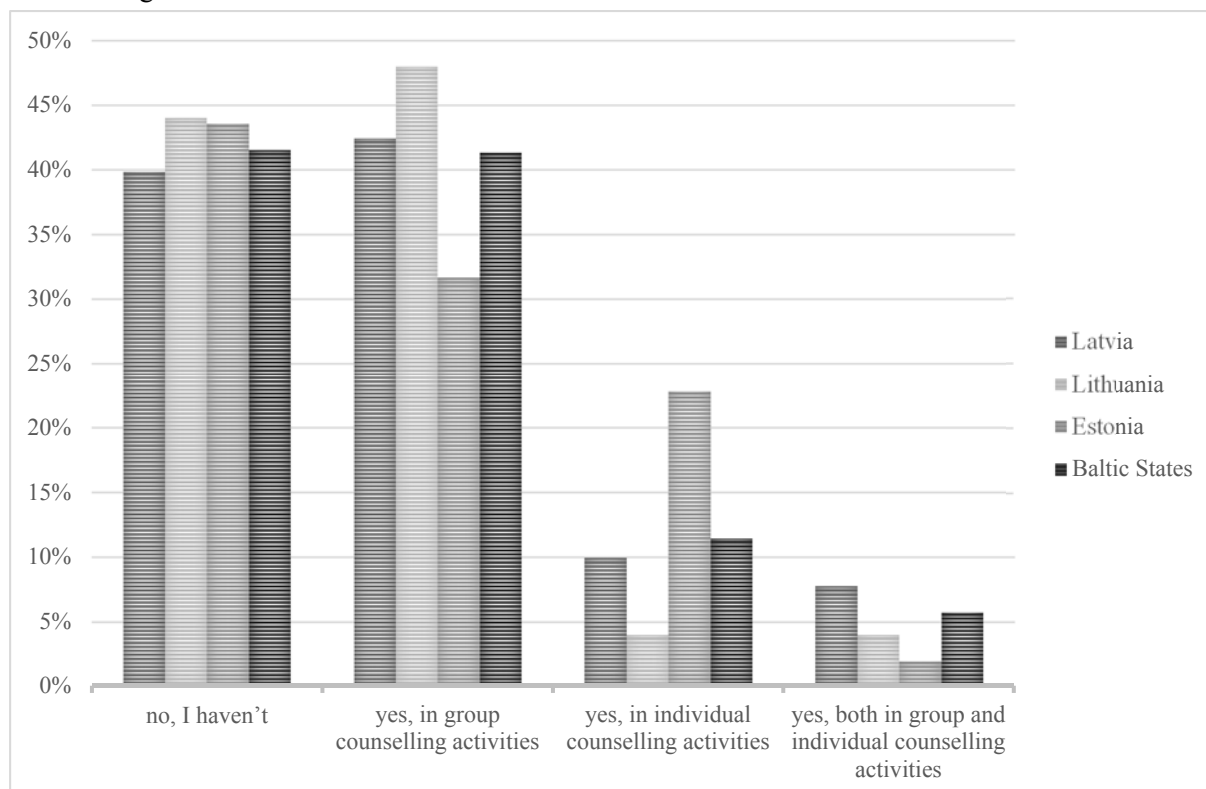
Figure 1. Pupils' participation in a counselling activity for choosing their career.

As mentioned above individual career plan preparation is one of the career guidance services provided in the Baltic States. The current situation is given in Figure 2.

Establishing the Baltic States pupils' needs in the area of career counselling as well as available instrument to satisfy those needs, they were asked to tick one of the given answer about potential career counselling needs identifying needs by the themselves The pupils were given the opportunity to speak their mind and let know about their needs regarding career counselling and guidance. Answers are collect in Figure 3.

Analysing results by gender aspect it should be noticed that girls need counselling from a person specialized in this field more then boys. Parents and friends' advice is enough for boys. Girls more often prefer online access to scientific information about vocational guidance.

Total 39% of pupils in the Baltic countries (Latvia 34%, Lithuania 43%, Estonia 51%) prefer to have access to scientific information about vocational guidance by means of specialized departments for vocational guidance. Online access is the most popular Latvian – 66%. They would prefer websites with scientific information appropriate to their age.
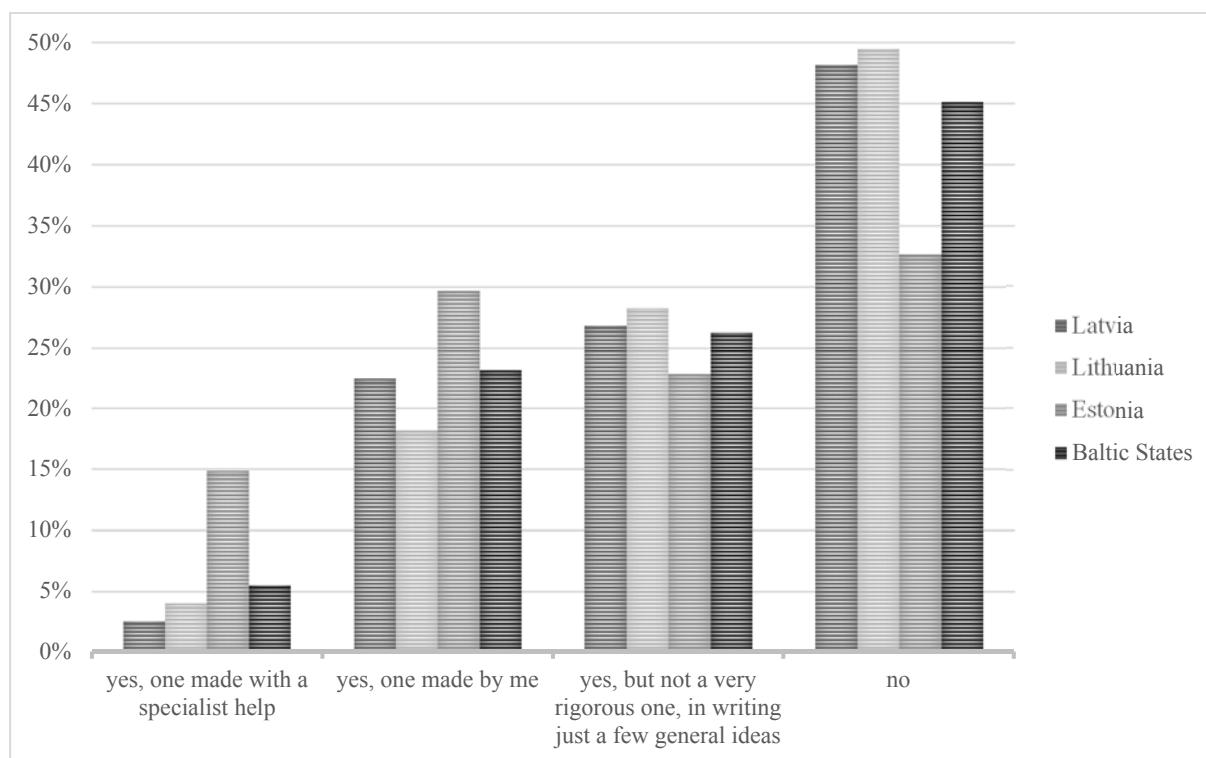
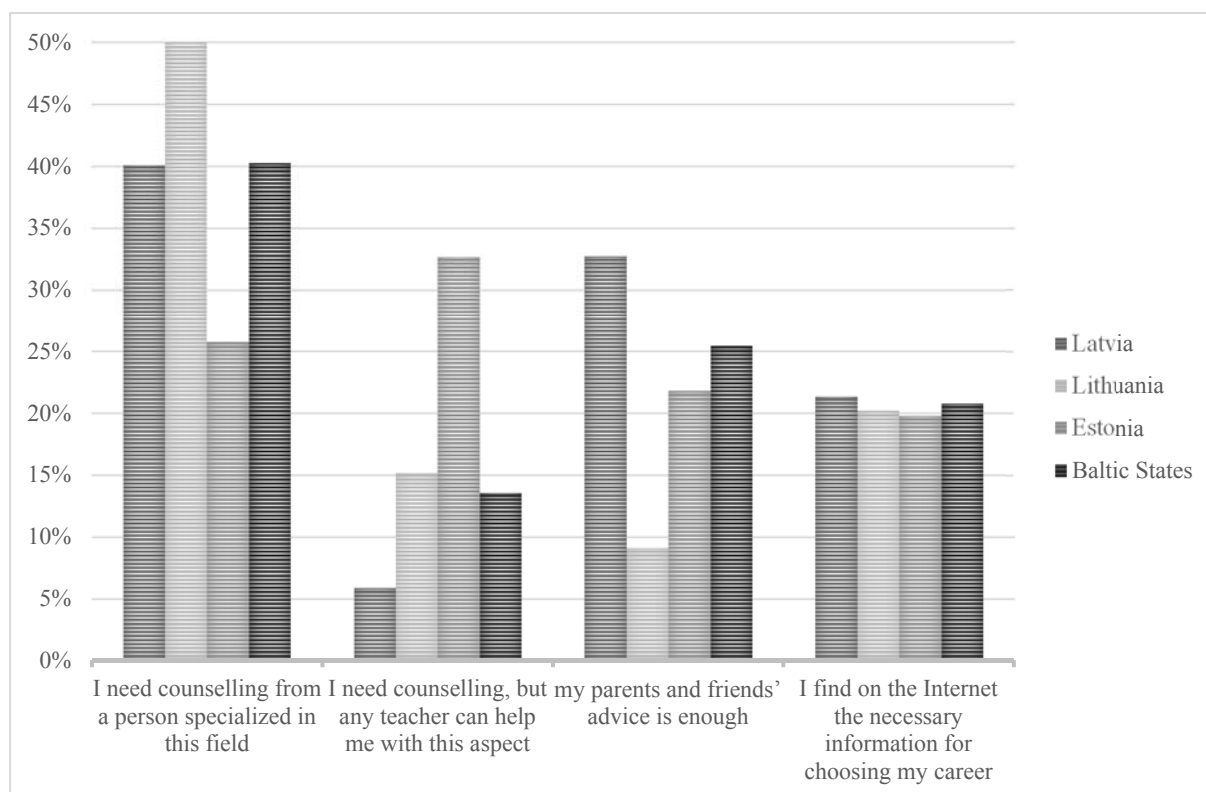Figure 2. Answers on question "Do you have a plan for personal development/a career plan?"

Figure 3. Baltic States pupils' needs by the career counselling way.

Pupils were offered to stick maximum two types of vocational guidance what they need: examples of good practices (e.g., the way a C.V. is filled in), advice, suggestions, practical instruction, support for self-knowledge or support for settling the objectives of the personal development plan/career plan. Answers are summarized in Figure 4.
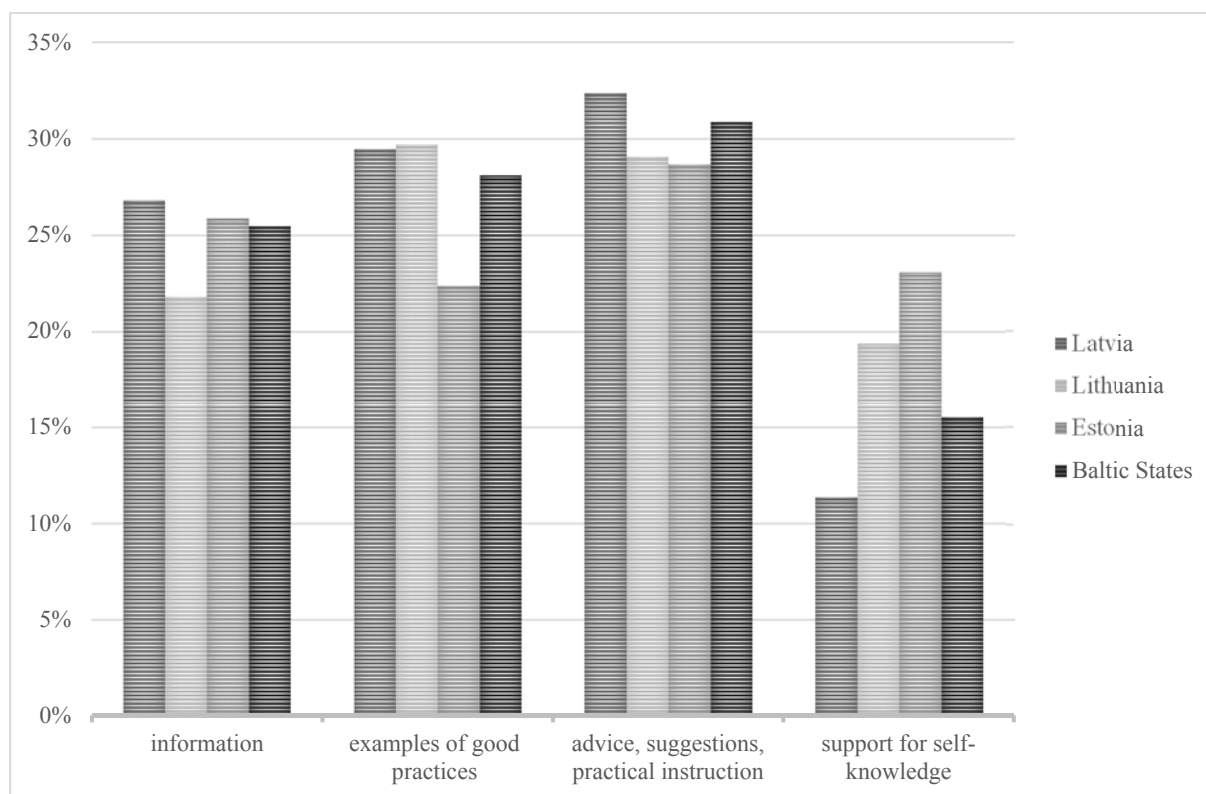
Figure 4. Baltic States pupils' needs by the career counselling kind.

In the questionnaire pupils were asked to specify for each field how necessary the information is suitable for their vocational career guidance by writing the numbers from 1 to 10 where 1,2,3 - unimportant; 4,5,6,7 – important enough and 8,9,10 - very important (Figure 5).
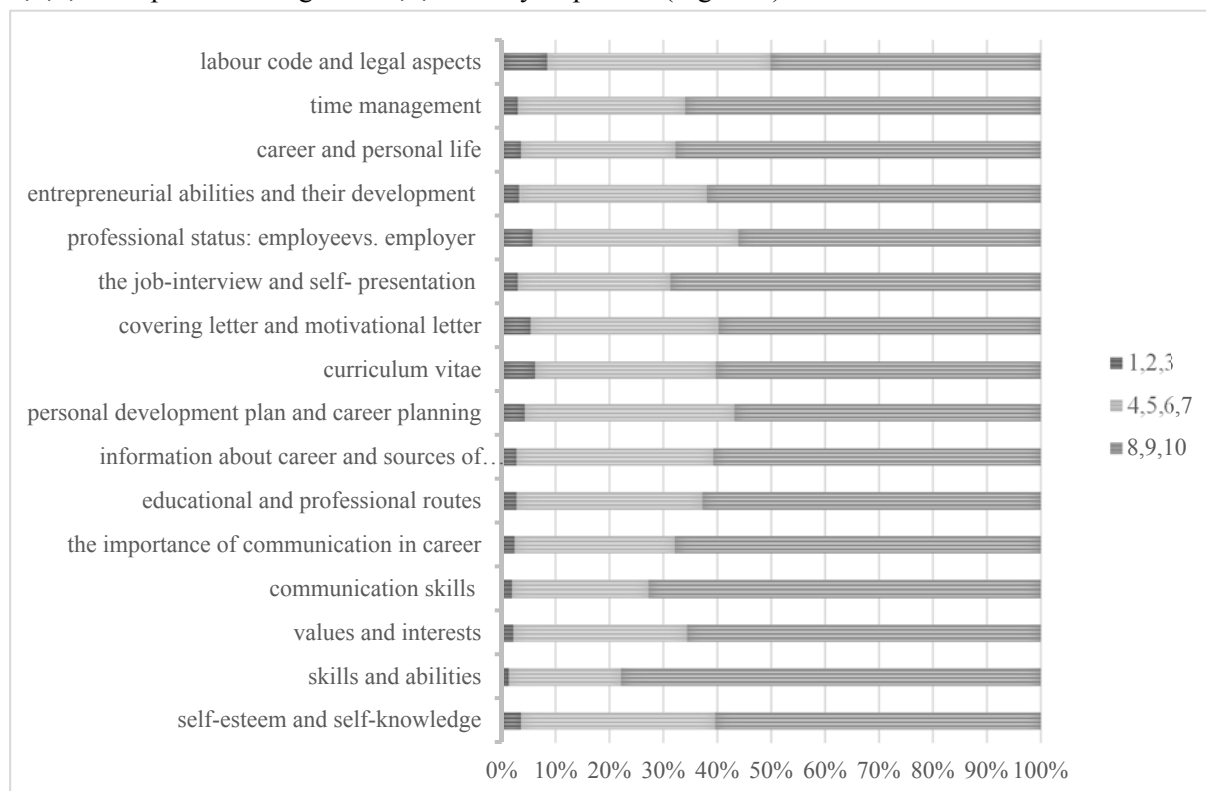
Figure 5. Assessment of the information suitable for pupils' vocational career guidance.

As pointed above it is important to ensure career management skills, interests and preferences to keep learners motivated and engaged in employment. Targeted and personalised support and guidance is needed to improve employability. The need and usefulness of career guidance and counselling could be proved by youth employment/ unemployment rates. Based on information from EUROSTAT database authors have calculated unemployment rate in the Baltic countries (Figure 6).
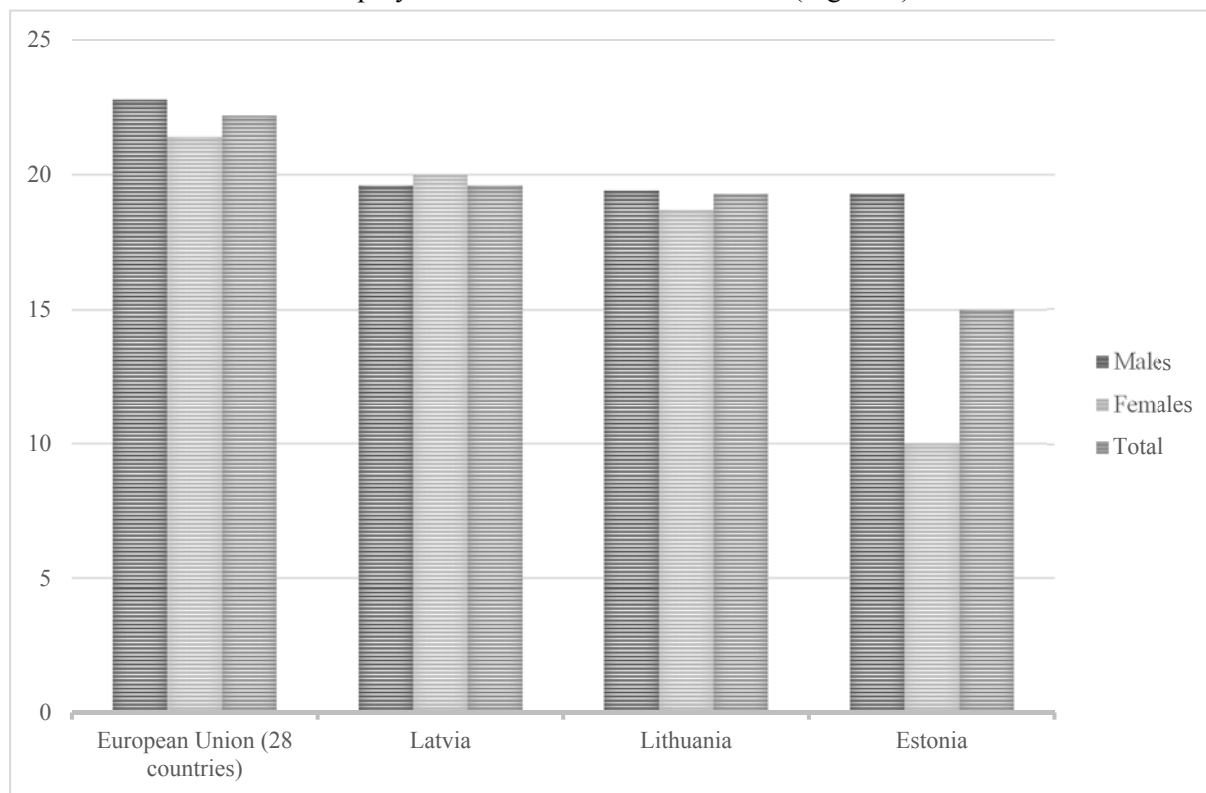
Figure 6. Unemployment rate 2014, % (age group – less than 25 years).

Results show that the unemployment rate in Estonia is 15%. It is the lowest among the Baltic States – in Latvia 19.6% and in Lithuania 19.3%. It should be noted that the unemployment rate in the Baltic countries is lower than as a whole in Europe.

Conclusions

According to the findings in Latvia special attention should be paid to the outcome depending on the pupils' residence:
- pupils from rural area more often have access to career counselling services by means of the school counsellor and they more often need counselling from a person specialized in this field;
- pupils from urban area more often have plans for personal development/a career plan and they prefer online access to scientific information about vocational guidance.

To analyse pupils' career guidance and counselling needs by country, it should be noted, that:
- in Estonia pupils need counselling but there are more confident that any teacher can help me with this aspect (33%), while the Latvian pupils the least rely on the support of teachers (only 6%);
- Lithuanians and Estonians prefer to have access to scientific information about vocational guidance by means of specialized departments for vocational guidance, but in Latvia the most popular is Online access;
- support for self-knowledge is more important for Estonians (23%), less – for Latvians (11%);
- Latvian pupils need more advice, suggestions, practical instruction;
- information about career and sources and skills and abilities as the most appropriate fields associated to vocational guidance are pointed by Lithuanians;

- Latvians think that the most appropriate fields associated to vocational guidance are skills and abilities as well as career and personal life;
- job-interview and self- presentation as well as curriculum vitae are appropriate by Estonians.

The results show that career guidance and counselling between the Baltic States are more developed in Estonia. The results prove that calculations of youth unemployment rate in the Baltic States is also lowest in Estonia.

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Business Students and Employers Attitude Towards Supervision

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Abstract: The research is done, because the role of supervision and professional business advisory continues to grow not only in Latvia, but in Europe as well. In increasing number of sectors, it is seen that supervision and its methods are used for emotional support and leadership ability promotion.

Whereas there is a growing need for specialists from this field, the aim of this research study is to investigate the emotionally evaluating attitude of students studying business in institutions of higher education, and also of employers, towards supervision.

The study included 50 students of business programs and 40 potential employers who might be supervision service workers. All three dimensions of attitude towards supervision are compared in the study: emotional, cognitive and behavioural, the links between each of them. In order to investigate the differences between attitudes of students and employers the T criterion was used.

The study concluded that, overall, students and employers' attitude towards supervision is positive, but they lack knowledge about it and are not consistent whether they would be willing to attend supervision sessions. Half of the respondents have never experienced supervision, but 80% think it would be useful for use in business. Differences between students and employers have been found in emotional (p=0.004) and behavioural (p=0.025) dimension of attitude.

The research and its findings give a better understanding of supervision and supervisor profession and minor public's attitude towards it. This is especially important because the growing number of academic education programs in Latvia creates a need to inform potential recipients of supervisor services - entrepreneurs and business managers.

Keywords: supervision, supervisor, attitude, higher education.

Introduction

The demand for supervision is currently developing rapidly globally and in Latvia. Since 2014, the profession of a supervisor/consultant, monitor appears in the section of lead experts of the Classification of Professions (Noteikumi par…, 2010). The Latvian Union of Supervisors (Sertificēti supervizori, 2015) includes 28 certified supervisors, has published two books and numerous articles of supervision, this profession can be acquired in three institutions of higher education: Riga International School of Economics and Business Administration (RISEBA), Riga Stradins University (RSU), Latvian Christian Academy (LKrA), and two doctoral dissertations related to supervision have been defended (Āboliņa, 2012; Truskovska, 2013).

The necessity of supervision in the public sector is already now acknowledged in various laws, other legal acts and drafts of the same, such as Law on Social Services and Social Assistance, Cabinet Regulation No. 291 "Requirements for Social Service Providers" of 3 June 2003 (Prasības sociālo…, 2003), Cabinet Regulation No. 48 "Concept for Development of Human Resources in Public Administration" of 6 February 2013 (Par valsts pārvaldes…,2013) which establishes that a consultative supervisor service should be provided in the direct public administration**,** and also policy planning documents (Zvirgzdiņa, 2013).

In most West-European countries, supervision is no longer a monopoly of the "assisting professions", and it appears in pedagogics and service sectors, the public and sector and business (Mārtinsone, 2010). Supervision has nowadays become a complex and flexible consultative opportunity due to its very wide scope: from working with a case and team supervision to consultation of an entire organisation (Horšers, 2007). It is expected that this tendency will become increasingly significant in Latvia soon, and supervision will more frequently be used in business-related professions.

Supervision can be used to handle problems which are already now significant for those working in business environments, such as frequent change of employers, dissatisfaction in the job environment, lack of motivation, etc. One may claim every business organisation requires supervision, because it may help to achieve own financial and business development targets and excellence in customer service.

If there is knowledge about, understanding of, and positively evaluating attitudes towards supervision and supervisors in the helping professions, then this does not frequently occur in business-related professions. What is better known in business environments is coaching, which is attainment of the desired targets (Fillery-Travis, Lane, 2006) or continuous cooperation between the client and the coach to help the clients achieve actual results in their personal and professional lives (Nieuwerburgh, 2014) by providing support and feedback to the clients (Auerbach, 2001).

It is often believed that coaching and supervision are the same. Several West-European countries, such as Germany and The United Kingdom, offer professional Master's Degree in coaching. There is no respective profession standard in Latvia. Thus, in Latvia coaching can be acquired in various professional courses by anyone, and this is inadmissible in the preparation of supervisors according to the education guidelines issued by the Association of National Organisation for Supervision in Europe (ANSE) (Welcome to the ANSE…, 2015).

Like in other places globally, there are two ways of understanding the fundamentals of supervision in Latvia. One is that the supervisor has certain competence, i.e., the profession (typically) acquired within two years, not before four years of successful experience in a certain area of professional activity. This approach id supported by the Latvian Union of Supervisors, which is a member of the Association of National Organisation for Supervision in Europe (ANSE). Another is that the supervisor is a monitor, a more experience colleague (with certain job experience, usually at least five years), who, among other tasks, assumes partial liability for the practice of the person being supervised in order to assure as high-quality professional activity as possible (Mārtinsone, Mihailova, 2014). This second approach is more widely known and used in business environments and management.

Although the Latvian Commission for Terminology approved the terms of supervision and supervisor (consultant/monitor) in 2013, the Ministry of Education and Science approved the standard for the profession of a supervisor in autumn the same year, and, in early 2014, it was included in the Classification of Professions. When searching for the term supervisor on the website of the Latvian Academy of Sciences, one can still find "monitoring and in-service training" (uzraudzība, darbaudzināšana). The current usage of the words of this group largely associates with the explanations (including even the meaning of a 'consultant, advisor') used by others to justify the borrowing of English terms mentoring, mentor, mentee" (Par *supervision…*, 2005).

Nowadays, supervision has become part of professional practice and also education in many professions. Nevertheless, there is shortage of information about it in business, and this explains the rationale of this research. When hearing the words "supervision, supervisor", many employers have different emotionally evaluating attitudes, and, for many of them, these may associate with in-service training, monitoring, and mentoring.

Attitude is a relatively stable, positively or negatively evaluating response which influences and motivates the behaviours associated with them (Olson, Maio, 2003), it may be targeted at a certain individual or event, at various things as well as at an abstract object, it helps the individual carry out an evaluation of an object or event, adapt to the environment and express their feelings or beliefs to others (Nevid, 2014). Attitude has an evaluating tendency, and it is this evaluating element which distinguishes attitude from belief (Davey, 2005), which can be measured by contrast signs: good – bad, pleasant – unpleasant (Ajzen, 2001). Attitude has three dimensions, they show in a wide spectrum the ways attitude may manifest in an individual (Rosenberg, Hovland, 1960, Ya Hui, Petty, 2013). The three dimensions (or components) of attitude are formed by cognitive (knowledge about an environment object), emotional (emotional evaluation of the object) and behavioural reactions to an object (purposeful action with regard to the object) (Chaiken, Pomerantz, 1995). Thus, attitude is defined as views regarding the achievement of certain targets, including understanding them, evaluation and readiness to act (Schwarz, Bohner, 2001). Emotional attitude largely differs from, for instance, cognitive attitude, because it may often not be logical or based on facts. Behavioural reaction, in its turn, may vary depending on the actions of the surrounding people, because the individual may go with the majority and act the way they do despite their knowledge and emotions being in contrast to the behaviour. It may be assumed that attitude can also be caused by false knowledge about an object.

The aim of this research study is to investigate the emotionally evaluating attitude of students studying business in institutions of higher education, and also of employers, towards supervision.

There were **three research questions during the study**: What is the emotionally evaluating attitude of students studying business towards supervision? What is the emotionally evaluating attitude of employers towards supervision? Are there statistically significant differences between the attitudes of students and employers towards supervision?

Depending on the knowledge of entrepreneurs and employers and their attitudes towards supervision, the demand for it will develop in future. Therefore, it is important to conduct research in this field in order to find out the attitudes of business students, who might be future employers, and employers themselves towards supervision.

Methodology

All three dimensions of attitude towards supervision are compared in the study: emotional, cognitive and behavioural, the links between each of them. Thus, it is possible to find out the affective attitude towards supervision, what the knowledge of both research samples about supervision is, and what behaviours in association with supervision each of the research samples has, simultaneously finding out whether there are any differences between the results of both samples and what these differences are. The survey consisted of 23 statements which were evaluated on a Likert-type scale with four values.

The survey was conducted between January 2015 and April 2015. The questionnaires were provided and sent out electronically to more than 100 people, four of them turned out to be invalid because they were not completed, and part of them were not returned. The total of 50 questionnaires from business students and 40 questionnaires from employers were obtained and processed. The average age of the students was 25 years, and the average age of the employers was 32 years. Out of all business students involved in the survey, 16 were males and 34 were females, whereas there were 9 males and 31 females among the employers participating in the survey. The students were in the third or fourth year of business programmes. The disproportionate distribution of the employers can be explained by the fact that a large part of the respondents were personnel managers, which is a predominantly female occupation. The types of occupation mentioned by the students most frequently were studies in the institution of higher education, customer service, sales, and duties similar to administration. The most frequent responses among the employers were personnel manager, entrepreneur, high-level manager.

The statistical analysis of the collected data was carried out using the IBM SPSS statistics program.

Results and Discussion

To verify the credibility of the designed questionnaire regarding supervision, the questionnaire was distributed among the initial 40 respondents (20 business students and 20 employers), and the Cronbach's Alpha (or the Consistency Coefficient) was calculated. It shows whether the statements are adequately and mutually consistent within each particular scale and within the entire survey (Table 1).

Table 1

The Cronbach's coefficient alpha for the questionnaire regarding attitude towards supervision

Scale	Cronbach's alpha	Number of statements
Emotional dimension	0.648	6
Cognitive dimension	0.820	11
Behavioural dimension	0.608	6
All dimensions together	**0.816**	**23**

The aggregate Cronbach's coefficient alpha for all the dimensions can be rated as very good (Table 1), which means that the results obtained during the survey are credible and can be used for further data analysis and interpretation.

Analysis of the results obtained from the student sample

The compliance with the normal distribution was assured by performing the Kolmogorov-Smirnov Z-criterion test (Table 2).

Table 2

The compliance of the results of the student sample with the normal distribution

	Emotional dimension	Cognitive dimension	Behavioural dimension	All survey together
Mean score	12.10	20.00	10.98	43.08
Standard deviation	3.06	5.01	2.84	8.47
Kolmogorov-Smirnov Z criterion	0.846	0.566	0.825	0.605
Significance	0.507	0.906	0.504	0.857

As can be seen, the significance for all scales and the survey in total is above 0.5, and this means that the data are presentable and can be used to make judgements regarding the entire population (Table 2). Descriptive statistics was used in the IBM SPSS statistics program to obtain the central tendency indicators, such as mode; median; and arithmetic mean. In addition to these, other values characterising the descriptive statistics were also calculated (Table 3).

Table 3

The descriptive statistics for the student sample data

	Emotional dimension	Cognitive dimension	Behavioural dimension	All survey together
Valid data, respondents	50	50	50	50
Mean value	12.10	20.00	10.98	43.08
Median	12.00	20.00	11.00	43.00
Mode	11	18	12	45
Skewness ratio	-0.170	0.199	0.215	-0.077
Standard error of skewness ratio	0.337	0.337	0.337	0.337
Excess coefficient	-0.248	-0.053	-0.614	-0.665

Regarding the skewness ratio (Table 3), which is negative for the emotional dimension and the survey in general, it can be said that the respondents have a tendency to higher values, which means that their attitude towards supervision in the emotional dimension is more frequently positive than in the remaining two dimensions of attitude. A comparison of the skewness ratio and the standard error of the skewness shows that the ratio is below the standard error for all of them, and this means compliance with the normal distribution. The mean value is 43.08, which almost ideally corresponds to the median of 43.00 and the mode of 45.00.

The excess coefficient, in its turn, is the same for all the scales (it is negative in all cases). A negative excess coefficient shows a tendency of the results to be spread along the X-axis, which means very different attitudes among the students on these scales. Both clearly positive and clearly negative attitudes can be seen, and there are also a lot of responses which are in between (likely negative and likely positive attitudes). A positive excess shows that the results tend to cluster around the mean value, which would mean that the opinions, or the attitudes, of the students are most frequently similar, but this does not occur on any of the scales. The score for the cognitive dimension is very close to zero, i.e., -0.053 (Table 3), and, for this reason, it is not unequivocal, and both positive and negative excess tendencies might occur in the responses of the students.

At the same time, the results of the survey conducted between the business programme students show:

In the emotional dimension. Absolutely all students involved in the survey think that supervision is useful nowadays; approximately one half of the students (44%) are more likely not in support of dealing with problems in a group; the majority (82%) of the students acknowledge that it is useful to spend time on planning personal growth; 58% of the students do not like discussing the internal activities and

problems of the enterprise with an outsider; most of the students associate the process of supervision with positive emotions; 78% of the students think that the process of supervision helps to identify own professional activity.

In the cognitive dimension. Approximately one half (46%) of the students lack knowledge about how to organise a supervision session; the majority (80%) claim that they understand the process of supervision, and the same percentage of students believe that there are situations in business when supervision is necessary; the attitudes of the students divide approximately in halves in all the statements related to supervision, methods of supervision, the information available about it, and also the definition of supervision as such; exactly one half of the students have experienced or heard about supervision before; 86% of the students believe that people doing social work require supervision.

In the behavioural dimension. 86% claim that they are ready to attend a supervision session if necessary, whereas others would most likely not attend such sessions; one third of the respondents acknowledge that they do not like discussing their targets or emotions with others, which is one of the components of supervision; only 62% of the students would be ready to organise a supervision session; the majority (64%) are not ready to pay for the services of a supervisor as part of their job; even though not all students would organise a supervision session, 92% of them would recommend supervision to a friend in case it seemed necessary; 40% of the students would avoid supervision in case it would involve group or team supervision.

Analysis of the results obtained from the sample of employers

To verify the credibility of the questionnaire, the compliance of the employer data with the normal distribution needs to be verified for the employer scale by carrying out the Kolmogorov-Smirnnov Z-criterion test (Table 4).

Table 4

The compliance of the results of the employer sample with the normal distribution

	Emotional dimension	Cognitive dimension	Behavioural dimension	All survey together
Mean score	13.95	20.65	12.27	46.87
Standard deviation	2.70	4.74	2.45	7.68
Kolmogorov-Smirnov Z criterion	0.955	0.567	0.734	0.674
Significance	0.322	0.904	0.654	0.755

It can be seen in the table that the data significance for all scales and the survey in total is above 0.05, and this means that the data are presentable and can be used to make judgements regarding the entire population (Table 4). Descriptive statistics was used in the IBM SPSS statistics program to obtain the central tendency indicators, such as mode; median; and arithmetic mean. In addition to these, other values characterising the descriptive statistics were also calculated (Table 5).

Table 5

The descriptive statistics for the employer sample data

	Emotional dimension	Cognitive dimension	Behavioural dimension	All survey together
Valid data, respondents	40	40	40	40
Mean value	13.95	20.65	12.26	44.86
Median	14.50	21.00	12.00	46.00
Mode	13.00	23.00	15.00	48.00
Skewness ratio	-0.426	-0.250	-0.117	-0.174
Standard error of skewness ratio	0.374	0.374	0.374	0.374
Excess coefficient	-0.819	-0.159	-0.786	-0.044

When viewing the skewness ratio, one can see tendencies which are completely different from those observed in the analysis of the student data (Table 5). All the coefficients are negative in the case of employers, and this means that the respondents show a tendency towards higher values in all dimensions

of attitude. So, positive or affirmative responses have been more frequently received in all dimensions of attitude. A comparison of the skewness ratio and the standard error of the skewness shows that the ratio is below the standard error more frequently, and this means compliance with the normal distribution. The mean value is 44.87, which almost ideally corresponds to the median of 46.00 and the mode of 48.00.

In the case of the excess coefficient, the results of the students and the employers are the same (Table 3 and Table 5), i.e., it is negative on all scales. A negative excess coefficient shows a tendency of the results to be spread along the X-axis, and not the mean value. Consequently, the attitude on these scales can be clearly positive or clearly negative.

Simultaneously, the results of the employer survey show:

In the emotional dimension. All the employers have acknowledged that supervision is useful nowadays; 78% of the employers think that handling problems in a group or team is useful, which is different from the attitude of the students; almost all (95%) of the employers believe that every individual only benefits from spending time on planning their personal growth; 68% of the employers do not see a problem in discussing job problems with an outsider; one tenth of the employers associate the process of supervision with more likely negative emotions; 85% of the respondents agree that a supervisor helps to identify own professional activity, its successes and failures.

In the cognitive dimension. More than a half (53%) of the employers do not know how to organise a supervision session for themselves or the team; approximately one half of the respondents understand what supervision is, where to find information about it, and what the process of supervision involves; 80% believe that there are situation in business when supervision is necessary; 40% have not experienced or heard about the use of supervisor services; 28% do not know what supervision is and are not sure about their knowledge; 78% would be able to explain to a friend what supervision is.

In the behavioural dimension. 95% of the employers are ready to attend a supervision session; approximately three quarters like discussing their preferences and targets with others; one third of the employers acknowledge that they would not organise a supervision session; slightly over one half (53%) of them would not pay for supervisor services as p[art of job; 92% would recommend supervision to a friend in case it seemed necessary; approximately every fifth employer (18%) would avoid group or team supervision.

Differences in the analysis of mathematical statistics

The T-test is used in the statistical analysis part because the T-test enables to determine statistically significant differences between the arithmetical means of the two samples. The T-test modification for independent samples, which is usually used in case there are two independent or two different samples, has been used. This is also the case here when students and employers are compared. This test can be performed only in cases when the results of the questionnaire comply with the normal distribution, which is true for this study. The T-test results have been obtained using the IBM SPSS software (Table 6).

Table 6

T-test difference results by scales between the students and the employers

Scale	T test	Significance
Emotional dimension	2.998	**0.004**
Cognitive dimension	0.621	0.536
Behavioural dimension	2.276	**0.025**
All survey together	2.200	**0.030**

The table shows the T-test results and the significance. When looking at the results, special attention should be paid to the significance. In case it equals or is below 0.05, then there are statistically significant differences between the two scales. If it is higher, there are no statistically significant differences, and such results have, possibly, occurred accidentally. In relation to this study, it is necessary to look at the emotional dimension for which the significance is 0.004 (Table 6), which means possibility of large differences, the behavioural dimension because the score for it is 0.025, which means differences

between the attitudes of the students and the employers towards supervision, and the survey in general because the significance for it is 0.030.

Differences in the emotional dimension. When viewing the central tendency scores of both samples, it can be seen that the student scores are in the range between 11 and 12 (Table 3), whereas the employer scores are in the range between 13 and 14.5 (Table 5), which means that the employer results are higher than those of the students. Consequently, the employers have a more positive emotional dimension of attitude than students. Even though the employer results are higher than those of the students, the mean scores of both for the dimension in which there are only 6 statements are with a comparatively high mean score of ~2, which means that more likely positive attitude towards the statements of the emotional dimension has been marked more frequently.

Differences in the behavioural dimension. This component of attitude is very essential because it shows whether the individual is ready to acts and, for instance, attend or pay for supervision sessions as well as organise or suggest supervision in their job when necessary. When viewing the mean scores and the descriptive statistics part (Table 3 and Table 5), it becomes clear that the students and the employers have the lowest numbers of points on this scale – 11 points for 6 statements for the students (Table 3) and 12 points for the same statements for the employers (Table 5). Both are frequently not ready to attend, organise or pay for supervision sessions. The employers should be highlighted particularly because they would, more frequently than students, not be willing to pay for supervisor services and would avoid supervision sessions.

Even though attitudes towards supervision in business environments have not been studied, the study conducted in Latvia involving social workers who have completed the course "Supervision in the management of a social case" (2 credits) and the results of the survey showed that social workers have insufficient understanding of supervision, taking university knowledge as the basis if no practical experience has been acquired (Āboliņa, 2012). The results of this study suggest insufficient understanding of supervision even among trained specialists, assuming that supervision, as a service, is not sufficiently popular and developed in Latvia.

Conclusions

The results of the study show that the emotionally evaluating attitude of the business students towards supervision is generally positive. They like the process of supervision and associate positive emotions with them, but they do not like team or group supervisions and discussing problems with strangers. The knowledge of the students about the profession of a supervisor are incomplete, but they are ready to attend supervision sessions, giving priority to individual sessions, but they are not ready to pay for it themselves.

The emotionally evaluating attitude of the employers towards supervision is generally positive. The employers think that the supervisor helps to become aware of one's own professional activity and that it is useful for dealing with problems jointly in a group. The employers also have incomplete knowledge about the process of supervision and the opportunities for organising it, but they would be willing to attend supervision in case they would not have to pay for it.

There are statistically significant differences between the attitudes of students and employers towards supervision, and this mostly manifests in the emotional (p=0.004) and the behavioural dimension (p= 0.025). The students more frequently have negative attitudes towards group supervision, and they would most likely avoid attending group or team supervision in their jobs. The employers, in their turn, would willingly to discuss the internal operations and the problems of the company with an outsider (a supervisor) and would more frequently than students be ready to pay for supervisor services.

An investigation of the negative attitudes of the students and the employers reveals that this is most frequently related to insufficiency of knowledge about supervision. The respondents do not know where to find information about supervision, its process, methods, or why team supervisions are useful. Therefore, it is particularly important to inform and educate entrepreneurs and employers, including use of mass media. More information about supervision would also change the negative attitudes of both groups towards the need to pay for supervisor services.

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Psychology

Quality of Hospital Nursing Work Life, Psychological and Subjective Well-Being

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Abstract: Topic is currently up to date due to the fact that the quality of working life for nurses, their psychological and subjective well-being affects not only nurses themselves but also others, because nursing is directly connected with caring for others. The goal of this scientific study was to find out the correlations between hospital nursing quality of working life, their subjective and psychological well-being. The study involved 56 medical nurses, aged between 25 and 65 years and with job experience of more than 5 years. The convenience method was used for the selection of the respondents, and all the nurses are from a single largest hospital in Latvia. Data abstraction was used: Quality of Nursing Work life survey, psychological well-being research survey, subjective well – being survey and the authors developed survey. The results of this study offer a wide range of answers on four study questions. Most of the medical nurses describe work life quality as satisfactory. Work life quality correlates positively with psychological well-being. The overall feeling of psychological well-being among the personnel is on a medium level. The respondents show higher scores for the ability to adapt to the environment and society, on the mutual relationship and sense of life scale. The respondents show lower scores on the autonomy, personal growth and self-acceptance scales. The respondents find relationship with other people important, and trust and well-being of others are essential for them. The study results allow make the conclusion that there is the correlation between quality of working life, psychological and subjective well-being. The results of this study could be used to optimise personnel's quality of working life as well as its psychological and subjective well-being.

Keywords: quality of work life, psychological and subjective well-being.

Introduction

The rationale behind the topic is that the work life quality, job satisfaction, psychological and subjective well-being of medical nurses affect not only medical nurses themselves, but also other people because the job of a medical nurse directly involves caring for people. The definition of work life quality has been developing since 1930, which is when Mayo studied the influences of workplace lighting on the job efficiency of the personnel. Soon after these studies, more studies were conducted into job satisfaction, the increasing concerns regarding civil rights and social responsibility (Hsu, Kernogan, 2006). Work life quality has been studied in a wide range of areas, including sociology, psychology, education, management, healthcare and nursing (Krueger, Brazil, 2002). Why is quality of work life so important? A high work life quality is necessary and highly significant in order to attract new personnel and retain labour. By focusing on improvement of work life quality, the organisation may increase personnel satisfaction, loyalty and productivity both individually and in the organisation in general. A happy personnel is efficient, devoted to work, and committed to obligations. On the other hand, inability to manage and monitor these factors may largely affect the manifestations of personnel behaviours (Almalki, FitzGerald, 2012). A working environment which is able to satisfy the needs of the personnel assures an outstanding quality of work life, which includes reward, promotion, recognition and development (Ajala, 2013). Medical nurses are the largest part of the personnel in healthcare organisations or hospitals. Therefore, it is not surprising that many research studies have been conducted specifically regarding concepts associated with the work life quality of medical nurses (Vagharseyyedin, Vanaki, 2011). Research suggests that high workloads of medical nurses have negative impacts on the quality of care and safety, and the quality of work life (Gurses, Carayon, 2009). It is highly important to improve the work life quality of medical nurses because poor quality of work life leads to high levels of medical nurse turnover (Hayes, O'Brien-Pallas, 2006).

Social, economic and political changes have increased significantly on the global scale in the last five decades. Consequently, individuals are forced to face new challenges, such as more difficult daily routines, continuously changing social and cultural standards requiring constant adaptation to the

conditions of life and work (Kallay, 2013). An optimal life, which is lead in well-being, outweighs evanescent joy and satisfaction, through focusing on own abilities and being aware of own potentials (Ryan, Deci, 2001, Ryff, Singer, 2008).

Work life quality is a multi-dimensional construct consisting of interrelated factors, such as work satisfaction, commitment to work, motivation, job efficiency, health, work safety/guarantee, improvement of abilities/competences, and a balance between work and private life. Nowadays, work life quality is defined as personnel satisfaction with individual and work needs while taking part in the achievement of the workplace targets (Almalki, FitzGerald, 2012). The key components of work life quality are clear mission and targets, mutual association, reliable management, common structure, proper training, systematic, mutual and structural support (Kline, 2009).

Already from the beginnings of philosophy, which further developed into psychological studies, well-being has been defined in two different aspects: subjective (hedonic) and psychological (eudemonic) well-being. One of the first propagators of subjective well-being was Aristippus of Cyrene (435-356 B.C.), who claimed that an individual should primarily strive to be happy. In contemporary psychology, subjective well-being is defined as satisfaction with life, frequent feeling of happiness and lack of negative emotions (Kallay, 2013).

Psychological and subjective well-being Research suggests that psychological well-being is a multi-dimensional concept, and that its manifestations can be found in various spheres of life. Like other values, well-being develops through a cluster of the following values: control of emotions, personal traits, identity and life experience. Psychological well-being includes both Eudaimonic and Hedonic components of well-being. The Eudaimonic components are described as living well (Ryff, 1989), whereas the Hedonic components are described as feeling well (i.e., getting positive emotions and life satisfaction (Keyes, Shmotkin 2002).) Psychological well-being has six dimensions: self-acceptance, mutual relationships, autonomy, being able to integrate into environment and society, sense of life and personal growth (Ryff, Singer, 2008, Kallay, 2013).

E. Diener (Diener, 1984) describe subjective well-being as a multi-dimensional construct consisting of three different components: presence of positive emotions, absence of negative emotions and life satisfaction. Consequently, there are two distinct aspects of subjective well-being: the cognitive, which is usually operationalised as assessments regarding the overall life satisfaction, and the affective, which has been defined in some studies as sense of happiness/unhappiness and measured as the individual's self-evaluation of their own emotional condition in a certain time period. (Myers, Diener, 1995).

The research questions in the project were the following: Are there links between the indicators of work life quality and psychological well-being? Are there links between the indicators of work life quality and subjective well-being? Are there links between the indicators of psychological and subjective well-being? Are there statistically significant relationships between the demographic indicators, work life quality, psychological and subjective well-being?

The authors believe that it would be valuable to investigate the links between work life quality and psychological and subjective well-being. The authors of the research study chose to investigate the hospital X, which is among the largest hospitals in Latvia. The goal of this scientific study was to find out the correlations between hospital nursing quality of working life, their subjective and psychological well-being.

Methodology

Design. The study was conducted in the hospital in 2015 in Latvia. A cross-sectional study design was used. Data were analysed by correlation analyses.

Participants: The study involved 56 medical nurses, aged 25 - 65 years and with job experience of more than 5 years.

Methods: Four surveys were used for the study purposes: Quality of Nursing Work Life (Brooks, 2001). After contacting the author and receiving his consent, the authors of the project carried out a linguistic adaptation of the survey. The results show the degree of the respondent's satisfaction with the quality

of work life; Scales of Psychological Well-Being (Ryff, 1989.) This has been adapted in Latvia in 2001. (Voitkāne, Miezīte, 2001). The Scales of Psychological Well-being measure aspects of well-being on six scales: Positive relationships; Autonomy; Environmental mastery; Personal growth; Purpose in life; Self-acceptance; Satisfaction with Life Scale (Diener, Emmons, 1985; Diener, 1984). The tool has been created to be able to measure the overall assessment of their life expressed by an individual; the authors developed a survey.

Procedure. The authors of the Paper prepared electronic questionnaires and, with the permission of the hospital management, sent them out to all medical nurses in the hospital.

Results and discussion

The Quality of Work Life (QWL) survey (Brooks, 2001) determines the indicators of the respondents' work life quality, which are divided into 4 scales: the work/home scale, the work design scale, the work context scale, the work world scale. A majority (39 respondents) describe their work life quality as satisfactory, and 16 respondents describe their work life quality as high. To interpret the results of the survey in greater detail, they were also investigated within the individual scales, by questions. The results were viewed based on the mean values of the results: The Work/Home Life Scale - the employees are generally satisfied with their current hours of work; on the Design Scale the respondents are generally satisfied with their jobs; the Work Context Scale - the respondents are generally satisfied with their colleagues, working environment, and the management, the employees receive support and assistance when needed, the respondents have adequate working conditions and recreation rooms, the respondents have good and trusting relationships with their colleagues; on the Work World Scale - the respondents are not satisfied with their salaries, the respondents specify that the society still perceives the job of a medical nurse negatively.
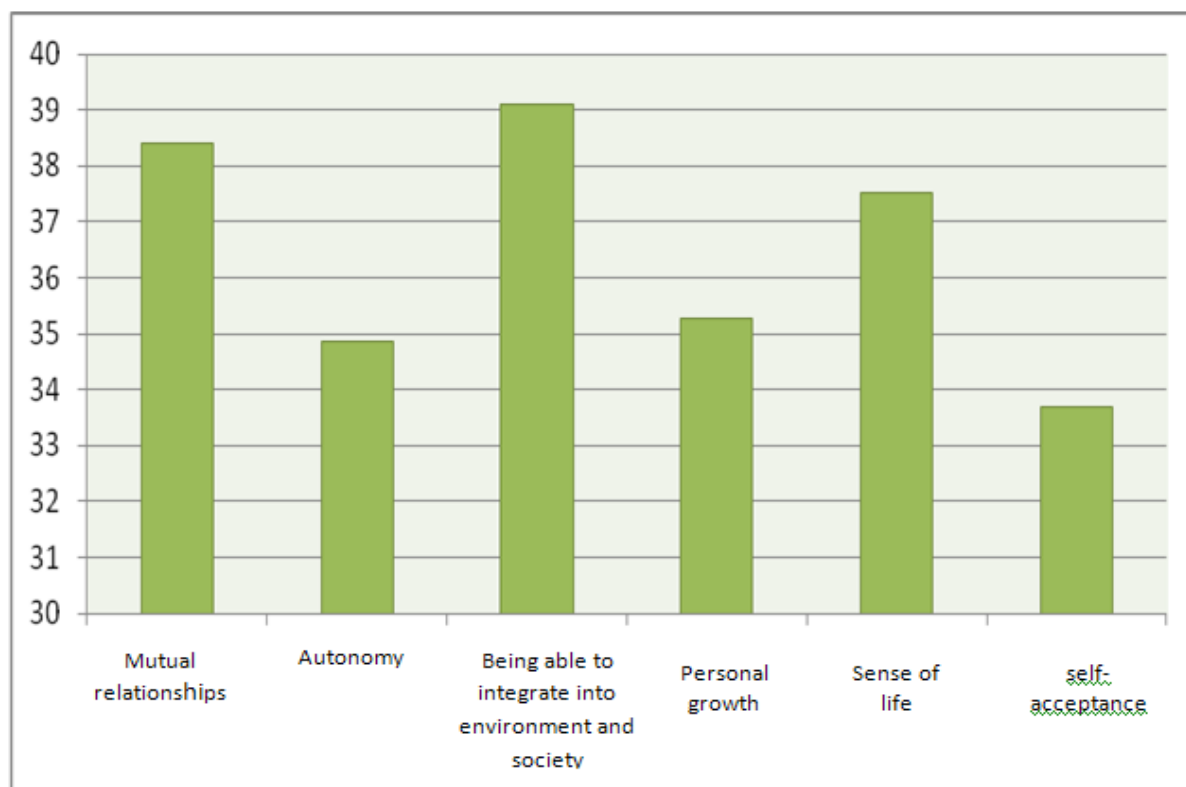
Figure 1. Distribution of the mean values of the results of the Scale of Psychological Well-being by C. Ryff by the scales of the survey.

The Scale of Psychological Well-being (Ryff, 1989) helps understand the aspects of psychological well-being of the respondents. These are divided into six dimensions to reflect the overall psychological well-being in more detail. Figure 1 shows that the respondents have higher scores for the ability to integrate into the environment and the society, and for the scale of mutual relationships and sense of life. The

respondents had lower scores on the autonomy, personal growth and self-acceptance scales, which are interrelated areas. If the individual is not satisfied with themselves, this may influence personal growth and autonomy. The respondents are probably not satisfied with their past and wish to be different.

On the Life Satisfaction Scale (Diener, Emmons, 1985), the tendency is that most of the respondents demonstrate medium scores and are slightly dissatisfied with life. The respondents have not provided marginal responses, and this suggests that the respondents have doubts and feel uncertain with regard to their life satisfaction. Thus, the respondents are generally neutral with regard to their lives, the attitudes are neither negative nor positive.

The Mathematical Statistics of the Study Data. All of the surveys used in the study comply with the normal distribution, and therefore the Pearson's Correlation Coefficient has been used to analyse the correlations.

The 1st research question. Are there links between the indicators of work life quality and psychological well-being? The results of the survey suggest statistically significant correlations between work life quality and psychological well-being ($r = .46$, $p \leq 0.01$); the higher the work life quality scores, the higher the level of psychological well-being.

The 2nd research question. Are there links between the indicators of work life quality and subjective well-being? There is a medium strong statistically significant correlation between work life quality and subjective well-being ($r = .29$, $p \leq 0.05$); the higher the work life quality scores, the higher the level of subjective well-being. There is a medium strong statistically significant correlation between the demographic indicators and the work life quality indicators: type of job (full-time, part-times) ($r = .27$, $r \leq 0.05$), which suggests higher quality of work life in those working full time, and lower levels of quality of work life in those working part-time. The following results were obtained from the calculations of the correlation between the work life quality scales and levels of life satisfaction of medical nurses: There is a medium strong statistically significant correlation between the level of life satisfaction and the work and home life ($r = .31$, $p \leq 0.05$) which means that the higher levels of links between life at work and at home, the higher the levels of life satisfaction, and vice versa, the higher the level of life satisfaction, the higher the scores for indicators describing life at work and home; the work design ($r = .31$, $p \leq 0.05$) which means that the higher the levels of job satisfaction, the higher the levels of life satisfaction, and vice versa, the higher the levels of life satisfaction, the higher the scores for satisfaction with work; the *work* environment ($r = .36$, $p \leq 0.01$) which means that the better one feels at work, the higher the scores for life satisfaction, and vice versa, the higher the scores for life satisfaction, the better the individual feels at work.

The 3rd research question. Are there links between the indicators of psychological and subjective well-being? The calculations of the links between the *psychological well-being scales and the level of life satisfaction* yielded the following results: there is a statistically significant link on just one scale, between the *level of life satisfaction and self-acceptance* ($r = .31$, $p \leq 0.05$) which means that the higher the level of life satisfaction, the higher the scores for self-acceptance, and vice versa, the higher the scores for self-acceptance, the higher the levels of life satisfaction.

The 4th research question. Are there statistically significant relationships between the demographic indicators, work life quality, psychological and subjective well-being? There is a medium strong statistically significant correlation between the *demographic indicators* and the *psychological well-being indicators*: education ($r = .28$, $p \leq 0.05$) which suggests that the higher the level of education, the higher the level of psychological well-being, and vice versa. The following results were obtained from the calculations of the correlation between the work life quality and psychological well-being scales of medical nurses: There is a medium strong, but statistically significant negative, correlation between *work, home life and personal growth* ($r = -. 26$, $p \leq 0.01$) which means that the higher the links between the work and home life, the lower the levels of personal growth, and vice versa, the higher the levels of personal growth, the lower the levels of links between work and home life, which can be interpreted as follows: the higher levels of links between their home and work life the individual has, the less time they have for their personal growth. There is a medium strong statistically significant correlation between *work design and ability to meet the daily needs* ($r = .32$, $p \leq 0.05$) which means that the higher the levels of job satisfaction, the higher the levels of ability to meet the daily needs, and vice versa, the

higher the levels of being able to satisfy the daily needs, the higher the levels of job satisfaction. There is a statistically significant correlation between *work design and self-acceptance* (r = .35, p≤ 0.01) which means that the higher levels of job satisfaction among the respondents, the higher the levels of self-acceptance, and vice versa, the higher the levels of self-acceptance, the higher the levels of job satisfaction. There is a medium strong statistically significant correlation between the *relationships between the colleagues and self-acceptance* (r = .27, p≤ 0.05). The better the relationships with colleagues, the higher the scores for self-acceptance, and vice versa, the higher the levels of self-acceptance, the better the relationships with colleagues. There is a statistically significant correlation between the *work environment and being able to satisfy the daily needs* (r = .37, p≤ 0.01) which means that the better one feels at work, the higher their levels of being able to satisfy their daily needs, and vice versa, the better the ability to satisfy the daily needs, the better the individual feels at work. There is a medium strong statistically significant correlation between the *work environment and self-acceptance* (r = .26, p≤ 0.05) which means that the better one feels at work, the higher the scores for self-acceptance, and vice versa, the higher the levels of self-acceptance, the better the person feels at work. There is a medium strong statistically significant negative correlation between the *work world and un the attainment of the goal in life* (r = - .28, p≤ 0.05) which means that the more adequate the payment for the work of a medical nurse, the lower the scores for the attainment of the goals in life, and vice versa, the higher the levels of attainment of the goals in life, the more inadequate the payment, which might be interpreted as follows: the lower payment the individual receives, the more they would be willing to attain higher targets in order to achieve better results. There is a statistically significant correlation between the *work world and self-acceptance* (r = .34, p≤ 0.01) which means that the more adequate the payment is, the higher the levels of self-acceptance, and vice versa, the higher the levels of self-acceptance, the more adequate the payment.

Conclusions

Work life quality, psychological and subjective well-being cannot be completely isolated from each other, as the three concepts are interrelated. Work life quality includes elements of psychological and subjective well-being, such as life satisfaction, mutual relationships and self-acceptance. Most of the surveyed medical nurses describe their work life quality as satisfactory. The respondents are satisfied with their jobs, colleagues, work environment and the management, the employees receive support and assistance when needed, the personnel have adequate working conditions and rooms for recreation, the respondents have good and trusting relationships with their colleagues. Personnel work life quality positively correlates with psychological well-being, but the overall sense of psychological well-being among the personnel is on a medium level. Medical nurses demonstrate higher scores for the ability to integrate into the environment and the society, on the mutual relationships and life sense scale, lower results on the autonomy, personal growth and self-acceptance scales, which are interrelated areas, and this suggests that in case the individual is not satisfied with themselves, this may influence their personal growth and autonomy. Medical nurses find relationship with others important, the trust of other people and well-being are significant for them, they are able to handle their everyday duties successfully, can use opportunities efficiently, and are able to create the environment according to their needs. Overall, medical nurses have positive attitudes towards themselves, they are aware of their good and bad character traits, and they are neutral in the thoughts about their lives. Medical nurses are not satisfied with the payment for their work and with how the work and image of a medical nurse are perceived in the society. If the employee is not satisfied with themselves, their personal growth and autonomy, this may affect their work life quality in general. By increasing personnel satisfaction with the quality of their work life and their psychological and subjective well-being in order to avoid low self-acceptance, personal growth and autonomy indicators, the human resources section should investigate and know what difficulties the personnel experience and what factors might contribute to insufficient levels of self-acceptance, personal growth and autonomy. This might potentially be achieved through use of anonymous surveys. The management of the hospital X should pay more attention to the personnel who have experienced some difficulties, provide support, listen to the problems, go deeper into these problems, and be able to help in dealing with the issues, in order to increase the trust of the personnel in the management. The research study was conducted within a single organisation, with its unique gender, age and education indicators. Based on the information obtained from the hospital management, other

hospitals largely have similar difficulties and problems, and there is therefore a high chance that the information and results obtained from one hospital might, at least partially, be attributed to other hospitals in Latvia.

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Attachment Styles among Teachers with and without Victimization Experiences in Estonia

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Abstract: The present study examined attachment styles (secure, avoidant and anxious/ambivalent) that differentiated teachers as victims of student and adult bullying and non-victims of bullying in school settings. A total of 576 teachers as two-stage cluster sampling in Estonia completed a self-reported measure to determine the victim-categories (victims of student bullying N = 77; victims of adult bullying N = 64; victims of student/adult bullying N = 74; and non-victims N = 361), and a self-reported measure to examine the three attachment styles (Multiple-item Attachment Scale: Simpson, 1990). Results indicated that teachers as single-target victims of students and adults bullying and teaches as multi-target victims of bullying in school settings had higher scores in avoidant and anxious/ambivalent attachment scales than non-victims of bullying. There were no statistically significant differences across scores of secure attachment among four study group members. Findings reflect the role of insecure – avoidant, anxious/ambivalent, attachment in the vulnerability to victimization of teachers by students and adults.

Keywords: attachment styles, victimization, teacher-targeted bullying, school settings, school education.

Introduction

Bullying occurs across variety of contexts (e.g. schools, prisons, residential homes, workplace) during childhood, adolescence and adulthood (Coyne, Monks, 2011). Most studies of school (Smith, 2011) and workplace (Coyne, 2011) bullying define bullying as a form of aggression, involving repetition and an imbalance of power. Bullying in a school context has received attention over more than three decades with research focus on bullying among students (Smith, 2011) and among schoolteachers at workplace (Edelmann, Woodall, 1997; Hubert, van Veldhoven, 2001; Malinauskiene, Obelenis, 2005). Bullying in schools overwhelms complex dynamics (Parsons, 2005) – teachers may be bullied by other teachers, students, staff, principals, parents, and may bully other teachers, staff, parents and students.

Teacher-targeted bullying is an issue of international studies providing predominantly evidence about its overall prevalence, and showing an increase in the prevalence during last decade (Kõiv, 2015a; 2015b; Workplace bullying…, 2012). Studies on the issues of teacher targeted bullying prevalence have looked at the problem from the perspective of victimization of teachers by students De Wet, 2006; Kauppi, Pörhölä, 2012; Ozkilic, Kartal, 2012; Pervin, Turner, 1998; Terry, 1998) and victimization of teachers by multiple individuals (e. g. Benefield, 2004; Kõiv, 2011; Workplace bullying…, 2012; Riley, Duncan, 2011) within the school settings. Also, it was found that teachers reported substantially more victimization in their workplace compared with university students' reports (Schäfer, Korn, 2004); and bullying against teachers came primarily from students followed by others adults in school settings (Benefield, 2004; Kõiv, 2011).

Attachment theory, as a developmental theory, offers a potentially useful conceptual framework for explaining bullying (Coyne, Monks, 2011). Empirically supported attachment theory reflects the nature of the parent-child bond across lifetime (Bowlby, 1969; Hazan, Shaver, 1994). An important component of attachment theory is that individual's develop schemas or styles of attachment that continue throughout their lives (Bowlby, 1969), classifying traditionally children's attachment quality into discrete categories – secure, anxious/ambivalent and avoidant (Ainsworth, Blehar, 1978).

Previous first studies, classifying toddlers' attachment status, have demonstrated that preschool children with history of insecure attachment were more likely to be involved in bullying (Troy, Sroufe, 1987), and were less socially competent in interactions with peers (Jacobson, Willie, 1986; Pastor, 1981) in play situation. Specifically, M. Troy and L.A. Sroufe (Troy, Sroufe, 1987) found evidence that preschool children classified as avoidant type were most likely to bully others and those with ambivalent attachment styles were more likely to be the victims of bullying. Also, toddlers' antisocial behaviour

was predicted by history of avoidant attachment and passive-withdrawal behaviour by anxious/ambivalent attachment status for boys (Renken, Egeland, 1989).

A limited amount of research has looked at the relationship between preadolescents' (middle school children's) bullying and victimization, and their self-reported current attachment styles. Findings along this line have revealed that a low quality of maternal attachment was related to both bullying and victimization of bullying (Walden, Beran, 2010); and the insecure parental attachment was associated with both self-report and peer-report measures of bullying (Eliot, Cornell, 2009). Comparison of preadolescents who classified themselves as securely or insecurely (ambivalent and avoidant) attached in close relationships revealed that securely attached reported less involvement in bullying and victimization (Kokkinos, 2013). It was also found that preadolescents with higher quality self-perceived attachment to their mothers (but not to father) were more likely to report standing up for victims of bullying than those with lower self-perceived quality of attachment (Nickerson, Mele, 2008). However, P.K. Coleman (2003) did not find significant relationship between preadolescents' self-perceptions of attachment to both parents and their reports of being victimized by peers.

Previous studies have linked the quality of attachment with adolescents' bullying behaviour, grouping respondents by different quality of attachment histories or by different bully-categories (bullies, victims, bully/victims, un-involved). The first mentioned study design was used by M.J. Dykas, Y. Ziv and J. Cassidy (Dykas, Ziv, 2008), with findings that insecure (dismissing) adolescents, compared to secure (autonomous) adolescents, were less likely to be socially accepted by their peers, less likely to be perceived as aggressive, shy-withdrawn, and victimized by peers. K. Kõiv (2012) found that bullies had higher scores in avoidant attachment scales than victims and non-participants of bullying; and victims demonstrated higher levels of insecure attachment than bullies and uninvolved adolescents. Z.A. Marini's and colleagues' (Marini, Dane, 2006) study revealed that bullies, victims and bully/victims had a lower maternal attachment than un-involved adolescents, with bully/victims having the lowest level of maternal attachment.

The theory of attachment as a framework for understanding interpersonal processes in the work context among adults has demonstrated links between adults' attachment styles to their personality domain, leadership, trust, satisfaction, performance and other work outcomes (Harms, 2011) with pioneering work of C. Hazan and P.R. Shaver (Hazan, Shaver, 1990). Previous research (Bloodworth, 2015; Parens, 2012; Williams, Kennedy, 2012) have examined the relationships between adults' attachment history and their aggressive behaviour in adulthood, indicating that insecure attachment styles had positive correlations with aggression. Also, demonstrating relationships between specific childhood attachment styles (avoidant and anxious) and specific types of aggression (physical and relational), it was revealed that (Williams, Kennedy, 2012): female young adults were more likely to report engaging in physical aggression when they scored higher on measures of attachment avoidance to their mothers and higher on measures of attachment anxiety to their fathers; and female young adults were more likely to report engaging in relational aggression when they scored higher on measures of attachment anxiety to their mothers, while male participants were more likely to report engaging in this form of aggression when they scored higher on measures of attachment anxiety to their fathers.

Another branch of studies had focussed on connections between adults' attachment styles and their retrospectively reported victimization experiences. Studies in this line have suggested that various victimization experiences in childhood may have a different impact on the quality of attachment styles in adulthood. Namely, it was shown that being teased in the social, appearance, and performance domains (versus academic and family domains) was significantly related to later attachment difficulties among university students (Ledley, Storch, 2006); and stable victims during schoolyears and secondary-school victims (versus primary-school victims) had significantly higher scores on fearful attachment style than non-victims among university students and teachers (Schäfer, Korn, 2004). Also, one pilot qualitative study (Kõiv, 2015a; 2015b) has demonstrated the prevalence of characteristics of insecure childhood attachment experiences tended to increase with the degree of frequency of teachers' workplace victimization experiences – it was highest among group of teachers with frequent victimization experiences, expressed less strongly in the group of teachers with rare victimization experiences, and was lowest prevalence among teachers without victimization experiences.

Exploring connections between adult male prisoners' current attachment style and their aggressive behaviour T.B. Hansen and her colleagues (Hansen, Waage, 2011) suggested that personality traits (e.g. agreeableness), but not adults' current attachment style, were important in explaining convictions for violent crime; and adult attachment styles played a significant role in explaining aggression in intimate relationships. In another study in prison context (Ireland, Power, 2004) dealing with adult male offenders current attachment styles and their prison bullying behaviour, respondents were grouped into four bully-categories: pure bullies, pure victims, bully/victims and not-involved. Comparing differences between studygroups in terms of secure, avoidant and anxious/ambivalent attachment it was revealed that bully/victims reported higher avoidant scores than the other bully-categories, with pure bullies and those not-involved reporting lower avoidant scores.

Thus, few previous researches on quality of adult attachment and workplace victimization have concentrated to adult attachment styles, whereby there is a plenty of evidence (Hansen, Steenberg, 2012) that parent-child relationships characterized by insecure attachments styles are predictive of school bullying victimization. However, an under-researched area to examine relationship between teachers' current attachment styles and their victimization behaviour in school settings emerges the new research question: Whether or not teachers who are victims of student and adult bullying in school settings can be distinguished by their attachment styles?

The aim of the present study was to investigate differences in attachment styles among teachers with and without victimization experiences in school context.

It was hypothesized that attachment style of the group of teachers who are identified as single- and multi-target victims of students and adult bullying should be more insecure compared to that of teachers who had no victimization experiences in school context.

Methodology

Study design and sample

Survey estimates are derived from a stratified, multi-stage cluster sample: in the first stage randomly selected three schools were selected from all 15 separate districts from Estonia representing basic schools and gymnasiums in rural and urban areas, whereby the ratio of different types of schools (basic schools versus gymnasium: 6 versus 4) among sample of schools corresponds to the whole-country school sample; in the second stage of sampling all teachers from in each school were selected; and during stage three teachers with and without workplace victimization experiences was identified.

In total, 576 teachers participated, representing a 41.8% response rate in relation to the online format individually sent questionnaire submitted by the author. Whole sample consisted of 576 teachers: 508 females (88.2%) and 68 males (11.8%). The mean age of the subjects was 46.4 years (SD=11.9) with youngest subject was 20 years old and the oldest was 71 years old. The average number of years in the teaching profession for the participants was 13.56 years (SD=4.82).

Of this sample of participants, 126 (22%) had bachelor's degrees, 421 (73%) earned master's degrees, and 29 (5%) had secondary or vocational education. The distribution of current teaching subjects for the sample was languages and literature 129 (24%), sciences 83 (14%), mathematics 80 (13%), social studies 69 (12%), technology and art subjects 65 (11%), physical education 41 (7%), and different subjects in primary level 109 (19%).

Instruments

Victimization of bullying

A self-reported instrument for the measurement of prevalence of different types of bullying of teachers by students and by adults (other teachers, administration parents and maintenance staff) in school context was developed (Kõiv, 2011) consisting of 15 items which described acts harming or hurting the target person. Participants indicated how often they had been bullied at school during last six month using a 3-point scale (never, often, very often) after a definition of bullying by following the pattern established by Olweus (1999). A person was considered a victim when he/she reported being bullied "often" or "very often" at least one out of a list of bullying items. Participants were classified into one

of four categories: "victims of student bullying", "victims of adult bullying", or "victims of student/adult bullying", whereby the last victim-category consisted subjects who had been both victims of student bullying and victims of adult bullying. The fourth type of classification of teachers was "non-victims" - teachers without victimization experiences, when they self-reported being bullied "never" across all 15 questionnaire items in the school context related with their relations with pupils and adults.

Attachment style

Multiple-item Attachment Scale, developed by J.A. Simpson (1990), was used to define in terms of present reports of attachment. This measure based directly on C. Hazan and P.R. Shaver's (Hazan, Shaver,1987) attachment measure indicating three paragraphs corresponding to the three attachment styles: secure, avoidant, anxious/ambivalent. The participants were asked to rate 13 sentences: five items for secure (e.g., 'I find it relatively easy to get close to others'), and four items for avoidant (e.g., 'I am somewhat uncomfortable being close to others') and anxious/ambivalent ('I find that others are reluctant to get as close as I would like') attachment style on a 7-point Likert scale, ranging from strongly disagree (1) to strongly agree (7). To measure each attachment style, the items corresponding to three paragraphs aggregated to form three attachment subscales, whereby higher scores reflected greater security, avoidance, or anxious/ambivalent attachment style.

Each subscale of the Multiple-item Attachment Scale was assessed and the 'secure' subscale demonstrated adequate reliability for a scale comprising of five items, with an alpha coefficient of .57; the 'avoidance' subscale (four items) with an alpha coefficient value of .68; and the 'anxious/ambivalent' subscale (four items) with a standardised alpha coefficient of .76. Item-to-total correlations were all positive.

Results and discussion

Victim-categories

Within whole sample (N=576), participants were placed into one of four victim-categories: "victims of student bullying", "victims of adult bullying", "victims of student/adult bullying" and "non-victims". Of the sample 13.4% (N=77) were placed into the victims of student bullying category, 11.1% (N=64) were placed in the victims of adult bullying category, 12.8% (N=74) were placed into the victims of student/adult bullying category, and 37.3% (N=215) were placed into the non-victims category.

Attachment style

The mean scores on the attachment measure were displayed across victim-categories (victims of student bullying, victims of adult bullying, victims of students/adults bullying, and non-victims) in the Table 1, whereby the higher scores were associated with an increased tendency to demonstrate each attachment style.

Table 2

Mean scores for victim-categories on the three-attachment style subscales

Attachment style	Victims of student bullying (N=77)		Victims of adult bullying (N=64)		Victims of student/adult bullying (N=74)		Non-victims (N=361)	
	M	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**
Secure	4.38	1.89	4.33	1.75	4.34	1.81	4.46	1.98
Avoidant	3.57	1.98	3.70	1.78	3.64	2.03	3.36	2.01
Anxious/ambivalent	2.76	1.68	2.95	1.56	2.93	1.75	2.40	1.50

One-way ANOVA's was carried out to assess differences across victim-categories for total scores on the subscales of the Multiple-item Attachment Scale.

The results, as shown in Table 3, indicated that there were several statistically significant differences with regards to teachers' current attachment styles and their victimization behaviors: (1) non-victims of bullying reported lower avoidant attachment scores compared with victims of student bullying, victims of adult bullying and victims of student/adult bullying; and (2) non-victims reported lower anxious/ambivalent attachment scores than victims of student bullying, victims of adult bullying and victims of student/adult bullying, whereby there were no statistically significant differences in avoidant and anxious/ambivalent attachment scores across groups of victims of student bullying, victims of adult bullying and victims of student/adult bullying. Secure attachment style did not differentiated significantly non-victims, victims of student bullying, victims of adult bullying and victims of student/adult bullying.

Table 2

F-values and p values comparing different victim-categories on the three attachment style subscales

Attachment style	F/p value	Victims of student bullying versus victims of adult bullying	Victims of student bullying versus victims of student/adult bullying	Victims of student bullying versus non-victims	Victims of adult bullying versus victims of student/adults bullying	Victims of adult bullying versus non-victims	Victims of student/adult bullying versus non-victims
Secure	F	0.19	0.09	1.03	0.02	2.09	1.88
	p	0.66	0.76	0.31	0.88	0.14	0.17
Avoidant	F	0.77	0.51	3.37	2.31	6.27	3.98
	p	0.38	0.47	0.04	0.13	0.01	0.04
Anxious/ ambivalent	F	2.23	1.44	14.07	0.09	13.34	18.35
	p	0.14	0.23	0.00	0.77	0.00	0.00

Present empirical attempts to understand bullying-victimization issues in different contexts among children, adolescents and adults (Coney, Monks, 2011) from the perspective of attachment have been strongly influenced by Bowlby's (1969) fundamental work. Attachment theory lays the groundwork for the present work focussing on teacher-targeted bullying in school settings, with generating the hypothesis that current attachment style of the group of teachers who are identified as victims of student and adult bullying in schools should be more insecure compared to that of teachers who were not victimized in school.

The results obtained from the study supported and specified this prediction. In general - there were significant differences in avoidant and anxious/ambivalent attachment styles between teachers with and without victimization experiences in the area of student and adult bullying. Specifically - there were differences between the teachers' victim-categories with regards to insecure attachment style, but not in secure attachment style. This only held with regards to insecure attachment, however, with non-victims reporting lower avoidant and anxious/ambivalent attachment scores than the all other victim-categories (teachers as victims of student, adult and student/adult bullying). This result is in agreement with previous findings indicating that children with anxious/ambivalent attachment history had greater risk for victimization (Troy, Sroufe, 1987); demonstrating that preadolescents and adolescents with parental insecure attachment were more likely to be involved in victimization of bullying (Dykas, Ziv, 2008; Kokkinos, 2013; Kõiv, 2012; Walden, Beran, 2010); and revealing links between adults' disturbed attachment styles and their childhood victimization experiences (Ledley, Storch, 2006; Schäfer, Korn, 2004), and adults' victimization experiences and their attachment styles or attachment representations (Ireland, Power, 2004; Kõiv, 2015a; 2015b).

Our results found a meaningful pattern in teachers' current attachment styles concerning with victim/non-victim status generally, rather consistent over different victim status groups (teachers as

victims of students bullying, teachers of victims of adult bullying, teachers as victims of student/adult) within the school relationship context. We concluded that teachers as victims of student and adult bullying – regardless of different victim status groups, rated the "avoidant" and the "anxious/ambivalent" profile higher than non-victims. This result reflects a trend that being a single or multi-target victim of bullying by students and adults in school setting had a negative impact on teachers' secure attachment style.

The paper suggests that the teachers' current insecure attachment, whether anxious or avoidant, may impact on their victimization behaviour in the school context. M. Schäfer and her colleagues (Schäfer, Korn, 2004) stated that attachment styles can be predictive of teachers' and university students' involvement in the retrospectively reported school bullying victimization; this study indicated that teachers' attachment status can be contributing as a risk factor to the development of workplace victimization. Given the significant impact victimization can have on teachers in school social contexts, it is critical that researchers continue to examine this issue. A deeper understanding of the factors that are associated with victimization will better to deal effectively with the problem.

The current results, although providing some new direction insights into the attachment style quality and victimization experiences among teachers, are not without limitations. The overrepresentation of woman in the samples and the disproportion of males and females in school settings made it impossible to make conclusions about gender differences. The results of the current study were based on self-reports made by teachers and are not restricted to any other occupational group.

Conclusions

The focus of this study was on the attachment styles among teachers with and without workplace victimizations experiences, taking into consideration the measurement of self-reported frequency of victimization in school context. With regards to teachers' current attachment style and their victim status (victim versus non-victim), significant differences were restricted to avoidant and anxious/ambivalent attachment: Non-victims reported higher scores than other victim-categories (teachers as victims of students bullying, teachers of victims of adult bullying, teachers as victims of student/adult). Consequently, we found that teachers, who were single and multi-target victims of children's and adults' bullying in school were more likely to exhibit avoidant and anxious/ambivalent current attachment compared with those who had no victimization experiences in school context.

Altogether, the current results fit well in the attachment theory and the evidence supports the idea that attachment problems are personal risk factors for teachers' workplace victimization. Findings along this line are useful for planning effective prevention and intervention tools in teacher-targeted victimization from multi-level relationship network at school setting.

The current study was important because it was the first attempt to understand the role of attachment quality in the teacher-targeted victimization at school setting. In order to acquire more knowledge about personal risk and resilience factors with regard to adult workplace victimization, there is a need for more research to address the present research questions among other professionals' groups.

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Implicit and Explicit Measures of Antisocial Attitudes of Criminal Offenders

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Abstract: At the present antisocial attitudes measured by implicit and explicit methods have been studied insufficiently. Research aim is to investigate attitudes towards violence of criminal offenders with Implicit Association Test (IAT) and self-report procedure. Participants: 53 convicted individuals, 28 ex-convicts and 78 previously not convicted individuals. Research methods: with an experimental procedure of IAT one variable was obtained – "implicit preference for verbal categories associated with physical violence". By using self-report procedure, the second variable was obtained: "explicit attitude towards physical violence". The results showed that there is a significant difference between explicitly measured variables of the groups "Convicts" and "Ex-convicts". There was no significant difference found of implicitly measured attitudes between the groups, but a slight tendency of the fact that previously not convicted individuals had more negative attitude towards violence was revealed. A significant correlation was found between implicit and explicit measurement results for the group "Convicts".

Keywords: antisocial attitudes, attitudes towards violence, implicit measures, explicit measures.

Introduction

Theoretical approaches for studying antisocial attitudes

The importance of antisocial attitudes predicting antisocial behaviour has been studied for decades (Glueck, Glueck, 1934). Nowadays the studies of antisocial attitudes have regained their popularity, because of the recent violence and aggression domain that has become a global problem. The advantage of assessing antisocial attitudes by explicit or/and implicit measures rather than the proxy of antisocial behaviour is that there is a potential for change even before the behaviour has taken place (Mills, Anderson, 2004).

Strong empirical evidence suggests that *antisocial attitudes* can be linked to criminal behaviour (Andrews, Bonta, 2010; Gendreau, Little, 1996). In a meta-analysis of 37 studies, it was concluded that antisocial attitudes out of six groups of risk factors showed the strongest correlation with criminal behaviour (Grendreau, Little, 1996).

There is no specific theoretical model explaining how antisocial attitudes should be classified or grouped (Andrews, Bonta, 2010). Antisocial attitudes have been referred to as thinking errors or cognitive distortions and have been defined as a thought process that supports criminality, meaning that interpretations of situations help to justify or commit specific criminal behaviours. In other words, antisocial attitudes point to a belief that individuals feel entitled to engage in criminal behaviours, regardless of the norms of the society or the negative effect on other individuals (Egan, McMurran, 2000). Research has shown that antisocial attitudes, also known as distorted thought processes, are important originators in the development and maintenance of antisocial behaviours (Barriga, Hawkins, 2008). *Antisocial behaviour* refers to any kind of behaviour, which radically differs from social norms and standards, and also violates the rights of other people, which can be violent or non-violent (Concise Dictionary…, 2009).

As there is no single model explaining how these cognitive distortions (aka. antisocial attitudes) are formed and maintained, it is essential to view the most important general models that explain how attitudes – association between a psychological object and evaluation of that object (Fazio, 2007) - have a practical and theoretical ability to predict and influence wide range of behaviours (Anderson, Bushman, 2002) thus – how an antisocial attitude can lead to the antisocial behaviour.

R.H. Fazio (1990) stated that attitudes, which are stored in memory, may have an uncontrollable and spontaneous influence on behaviour. Attitudes are formed through various exposures to an attitude object and become more permanent over time. R.H. Fazio developed Motivation and Opportunity as Determinants (MODE) model stating that attitudes are activated in the presence of an attitude object and the immediate activation (implicit attitude) is more likely to occur with stronger attitudes. In contrast, the deliberative propositional reasoning (explicit attitude) occurs when there is no set attitude towards an object (Fazio, 1990). In considering this, pro-antisocial attitudes are more likely to occur if the prior antisocial behaviour has resulted in a positive outcome.

The Associative-Propositional Evaluation (APE) model views attitudes as evaluations, which are underlined by two forms of mental processes- associative processes underline implicit attitudes and propositional processes underline explicit attitudes. APE differs from all the other models with the suggestion that implicit attitudes can be activated regardless if one believes them to be positive or not. Also it is stated that implicit attitude in combination of evaluation of validation or truth can become explicit (Gawronski, Bodenhausen, 2006).

Explicit and implicit methods in researches of attitudes towards violence

According to all the discussed theories antisocial attitudes, in this case- attitudes towards violence are evaluations of violence. *Violence* is defined as the most severe type of physical or nonphysical aggression that is likely to cause serious physical or psychological harm. The process of turning *violence* in to *criminal violence* is determined by the law. Without the law the severity of violence is not important, it is not a crime. These violent acts usually involve *physical violence*- the use of physical force, often causing serious injury (Riedel, Welsh, 2002).

APE and MODE model suggests the duality of attitudes, meaning that it would be necessary to assess both implicit and explicit attitudes towards violence, because they may be differently linked to violent behaviour, thus using implicit measurements (defined as "unconscious, automatic and indirect") and explicit measurements (defined as "conscious, controlled and direct") (Petty, Fazio, 2009). Unfortunately, mostly explicit methods are used when attitudes towards violence are assessed.

In comparison with investigations researching different forms of violence, antisocial attitudes towards criminal violence of criminal offenders is less popular study field. Nevertheless several researches have been conducted on the topic, for example, J. F. Mills studied attitudes and recidivism and the results have shown that there is a link between antisocial attitudes and prior convictions and incarcerations (Mills, Kroner, 2002). The same findings L. Simane et al. concluded using implicit measurement methods in the research of attitudes towards theft (Simane, Plotka, 2013).

Up to date not many researches (Snowden, Gray, 2004; Polaschek, Bell, 2010; Robertson, Murachver, 2007; Eckhardt, Samper, 2012) on attitudes towards violence have been published, using implicit measurement methods, e.g., Implicit Association Test (IAT) and only a couple of the researches used violent criminal offenders as a sample. IAT is a computerized experimental procedure where the participant is asked to sort categories and attributes. The reaction times are fixed and faster response times are expected when sorting stimulus for categories that are more strongly associated (Greenwald, McGhee, 1998).

A study was conducted by R.J. Snowden et al. (2004) in which IAT was used to assess implicit attitudes towards violence among a sample of violent offenders. The sample consisted of two groups – murderers and non-murderers. As explicit measures semantic differential and a feeling thermometer rating the target concept was used. The results showed significant three way interaction between IAT condition, offender group and psychopathy on IAT scores. No significant differences on IAT scores were found between murderers and non-murderers (Snowden, Gray, 2004).

D. L. Polaschek et al. (2010) conducted a study with the aim to assess if cognitive behavioural therapy affects attitudes towards violence of criminal men using two IAT procedures and Criminal Attitudes to Violence scale (CAVS) (Polaschek, Collie, 2004) and an aggression questionnaire. The results showed that participants had pre-programme preference for the non-violence category on both IATs. Violence IAT showed no significance in the result comparison before and after the therapy. The explicit methods showed that after the therapy the participants became less aggressive and their preference for violence

decreased. There was no correlation found between results of explicit and implicit measurements, which suggest that explicit and implicit measures of aggressive cognition are not related (Polaschek, Bell, 2010).

This article presents a study using IAT method to research antisocial attitudes, more specifically – attitudes towards violence of criminal offenders. The modified two categories IAT and CAVs were based on D. L. Polascheks et al. (2010) research and applied to the languages and cultural settings of Latvia. Numerous empirical studies conducted in recent years pointed out on controversial judgments on the understanding of the correlation between implicit and explicit measures of the same psychological construct. The issue of congruency of implicit and explicit measures is very complex and is seen differently in the frames of different approaches (Rudman, 2013; Fazio, Olson, 2003; Plotka, Urbane, 2015).

The *aim* of the research is to investigate antisocial attitudes (attitudes towards violence) of criminal offenders with Implicit Association Test (IAT) and self-report procedure.

The Research questions

1. Is there difference in attitudes towards violence measured by IAT and self-report procedure of convicted individuals, ex-convicts currently undergoing probation and individuals, who have never been convicted?
2. Is there a compliance of measurements of attitude towards violence obtained by experimental procedure IAT and self-report procedure?

Methodology

Participants

Three groups of participants were formed:
-   "Convicted" (Con) group consisted of 53 volunteers drawn from a population of federally incarcerated adult males sentenced and residing at a penitentiary institution in the East of Latvia. All of them have committed at least one violent crime.
-   "Ex-Convicts" (ExCon) group consisted of 28 volunteers on probation- adult males, who have served their time in a closed-type penitentiary institution for committing a violent offence and at the moment are under supervision of the State Probation Services.
-   "Non-convicts" (NonCon) group consisted of previously not convicted adult male volunteers (N=78).

Implicit measure

A modified version of Implicit Association Test – Criminal Violence IAT was specially designed for the experiment. The modified IAT method was created, based on the classical seven block IAT design (Greenwald, McGhee, 1998). The Criminal Violence IAT categories and stimulus were based on D.L. Polaschek's et al. (2010) Violence-Houswork IAT. The verbal stimulus were applied to the cultural settings of Latvia and the IAT was created in both- Latvian and Russian languages to match the mother tongue of the participant.

Explicit measure

Linguistic adaptation of "Criminal Attitude towards Violence scale" (CAVs) (Polaschek, Collie, 2004) was conducted. The questionnaire is one factor instrument measuring attitudes towards non-sexual physical aggression.

The method of three times reverse translation was used. The scale was translated in Latvian and Russian languages. After previous experiment where 100 ex-convicts were surveyed, the questions that caused suspicion were overlooked. This time the internal consistency was satisfactory ($\alpha=0,8$) meaning that the translations are adequate and the next stage of the adaptation can occure.

Procedure

Phase 1: Data collection from the groups "Convicted" and "Ex-convicts"

Researchers gained permission to be able to go in to penitentiary institution and probation centre. Participants were briefly explained of the aims of the study and that the participation is voluntary and that this experiment will not affect the process of their probation or the enforcement of the sentence in any way. After individually they were offered to complete the experimental procedure IAT on the computer and fill in the questionnaire.

Phase 2: Data collection from the group "Non-convicts"

Previously not sentenced individuals were asked to provide details of their profession and daily job so we could assess if their profession is associated with violence, which is a rather controversial subject and lacks theoretical background, but professions as police men, fire fighters, lawyers etc. were excluded. The rest of the mail participants were individually asked to complete the experimental procedure IAT on the computer and fill in the questionnaires.

Results and discussion

Explicitly measured variable: "Explicit attitude towards physical violence" (CAVs).

Implicitly measured variable: "Implicit preference for verbal stimulus associated with physical violence" (D(IAT)).

First research question

For each group the indicators of descriptive statistics were calculated and the compliance of data distribution with normal distribution was verified. It was found that variables D(IAT) and CAVs can be studied by methods of parametric statistics.

The means of variables D(IAT) and CAVs for the groups "Convicted" (Con), "Ex-convicts" (ExCon) and "Not-Convicted" (NonCon) were researched. Figure 1-2 shows the means of these variables.
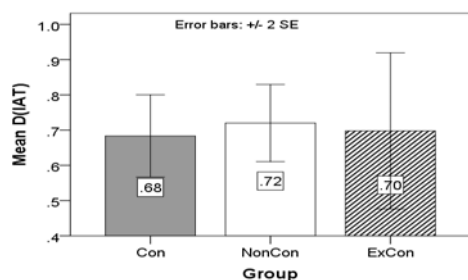
Figure 1. The Means of D(IAT).   Figure 2. The Means of CAVs.
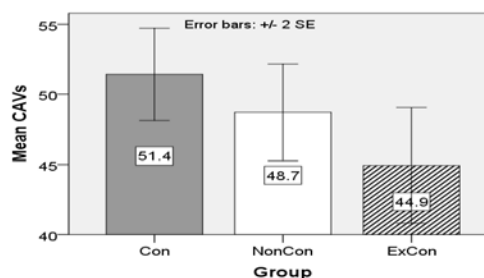
CAVs has a single-factor structure and lower score indicates strong disagreement with the beliefs about violence and upward of this indicates greater endorsement of the beliefs about violence. The authors, using the quartiles, separated the results in to three levels, which provide an estimate of the magnitude of the violence effect: CAVs statistics of 39- 57 correspond to medium effect size, above 57 - large effect size. The mean value of the variable CAVs for Group "Con" is significantly higher than the mean for Group "ExCon": $t(79)=2.38$; $p \leq 0.05$ (Figure 2). Thus the convicted individuals (Con) had significantly higher explicit preference towards violence than the individuals on probation (ExCon). It could be possible that individuals on probation more likely provided socially desirable answers in fear that the results might influence their probation.

IAT scores discovered that pro-violence attitude obtained only some individuals in each group, but the mean D scores of all three groups indicates implicit preference for the non-violence stimulus. These findings are common (Polaschek, Bell, 2010; Eckhardt, Samper, 2012) and could be explained that not the right category was chosen to oppose violence or if the third and fourth IAT trials would be violence + positive words and the last trials would be violence + negative words , the findings would be different. Further research is necessary to compare or deny these allegations.

The D statistic provides an estimate of the magnitude of the IAT effect: D statistics of 0.15, 0.35, and 0.60 correspond to small, medium, and large effect sizes, respectively (Rudman, 2013). Significant

difference between groups for the variable D(IAT) has not been found (Figure 1). Although the mean implicit preference for groups "Con" and "ExCon" was in the range of "medium effect size", but the means of the D score of previously not convicted individuals were in the range of "large effect size", meaning that even though there was no significant difference found, the mean difference shows that previously not convicted individuals have stronger preference to non-violent stimulus than previously convicted individuals. The authors believe that with the change of the experimental procedure (e.g., designing Single-Category IAT (SC-IAT)) it is possible to gain significant difference between the groups.

Second research question

The research of the complience of measurement results of violence's attitudes, obtained with experimental procedures of the IAT and self-report procedures was performed using Spearman correlation coefficients. The results showed compliance of implicit and explicit measurements of researched constructs evaluated by the correlation coefficients, the values of which fall within the valid range from 0.12 to 0.72 (Rudman, 2013). In the groups "NonCon" and "ExCon" no correlation was found between implicitly and explicitly measured attitudes, as it was in our previous researches (Simane- Vigante, Plotka, 2015). Interestingly, there was a statistically significant relationship found in the group "Con" $r(53) = -0.276, p \leq 0.05$. The "minus" sign indicates that large D(IAT)-scores and small CAVs-scores match preference to non-violence.

Conclusions

As a result of the research, its aim and objectives have been implemented and the main results are presented. Theoretical analysis of various models of antisocial attitudes indicates the insufficiency of empirical verification of violence as an attitude and the need to develop alternative methods for its consideration.

The research questions have been answered – there is a mean difference in attitudes towards violence of convicts, ex-convicts (individuals on probation) and previously not convicted individuals on both implicit and explicit levels and there is statistically significant compliance between attitudes of violence obtained by implicit and explicit measurement methods in the group "convicts". The gained results correspond to previous researches.

The limitation of the study: when studying attitudes towards violence, it is difficult to find the opposite category to compare it with. The use of *House work* as an opposite category to violence has proven to be not entirely suitable. It has been planned to create a Single-Category IAT (SC-IAT) or personalized IAT for further research.

IAT is a useful tool in social and psychological rehabilitation for criminal offenders to monitor the change of criminal attitudes. IAT is also very valuable tool in recruitment and psychotherapy, because it was discovered that some individuals, who have never been convicted before show a very high level of implicitly measured pro-violence attitudes, meaning that some of the most dangerous criminals may never commit a crime, but may act violent if situation presents itself.

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Didactics of Engineering Siences,

Usage of IT

Electronic Educational Atlas for Schools in Kazakhstan

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Abstract: In the article the methodology of the research which is carried out within scientific project, the analysis of scientific and methodological literature concerning the creation and application of electronic educational atlas on Geography are considered. The content of the electronic educational atlases and the maps of Kazakhstan, and also interface screenshots of the electronic atlas showing functions of navigation on the maps of the atlas, scaling, preview and the printing of maps, export of maps in the graphic editor, saving of maps in the raster file and opening external and additional shape files are presented in the article. In the main part of the article the didactic functions and educational problems are described which a teacher and a pupil can solve using electronic educational atlas in the Kazakh, Russian and English languages. In the concluding part of the article the technology of the creation of electronic atlas is described developed by means of work with spatial data of a library Open Source MapWinGIS ActiveX Map Control and a programming language C# 5.0 in the environment Visual Studio 2013. The created atlas adapted for school education will allow to intensify process of introduction of geo-information technology in the education.

Keywords: geography, geo-information technology, didactic of electronic atlas, school education.

Introduction

The modern elementary and high school is characterized by active approach of geo-information technologies. Nowadays in some countries (the USA, Great Britain, Austria, India, Russia, Ukraine and others) the geographical information systems (GIS), in particular electronic educational atlas are widely used in school geographical education. (Demirci, 2009; Milson, Demirci, 2012; Jones, Blake, 2004; Roosaarea, Liibera, 2013). "The geo-info set of educational maps "Atlas" project is carried out at Kokshetau State University named after Sh. Ualikhanov, according to the budgetary program of the Ministry of Education and Science of the Kazakhstan at the Natural Science Department. The goal of the project is to determine the structure of the functional possibilities, content, the technology of creation of electronic educational atlas in geography. The electronic educational atlas is developed for the schools in Kazakhstan for the first time. In present there are some thematic projects to solve specialized scientific and applied problem in business and management in Kazakhstan. The analysis of specialized scientific material, pedagogical practice shows the usage of electronic educational atlases at geography lessons and in extracurricular activities prominently expands the educational activity of the teacher and the pupil of school stimulates cognitive curiosity, forms geo-information competence.

Methodology

The first stage of scientific- research work is based on the analysis methods of domestic market- resume, interview; and geo-information methods of work with electronic raster images and their transformation to the unified map system of coordinates and projecting with further vectoring. The analogues of electronic educational atlases of Commonwealth of Independent States (CIS) and the world are analyzed. (Haeberling, Baer, 2011; Sigalov, Skuratov, 2012; Барладин 2015; Лаборатория учебных..., 2015). The analysis of educational textbook and the map sets are analyzed. According to the two-year scientific study there were thematic editions for the following maps of Kazakhstan: physical map, the map of territory investigation, geological map, tectonic maps, mineral resources map, climate map, hydro graphic map, natural zones, physical-geographical map of the Kazakhstan regions, economic, ecological maps. The basic sets of the maps for geological, climate cycles are developed, and also the plant and soil cover for the maps of CIS. The fine-tuning of vector layers for the maps of CIS, the rest of the world, testing, approbation of the electronic educational atlases in geography at schools, the creation of the methodical recommendation for teachers are carried out at the final stage of the work.

Results and discussion

Research work on working out e-learning school atlas begins with the analysis of equipping schools with geographical maps. The results of the questionnaire of 96 of geography teachers of Akmola region were summarized in the diagram shown in (Figure 1).
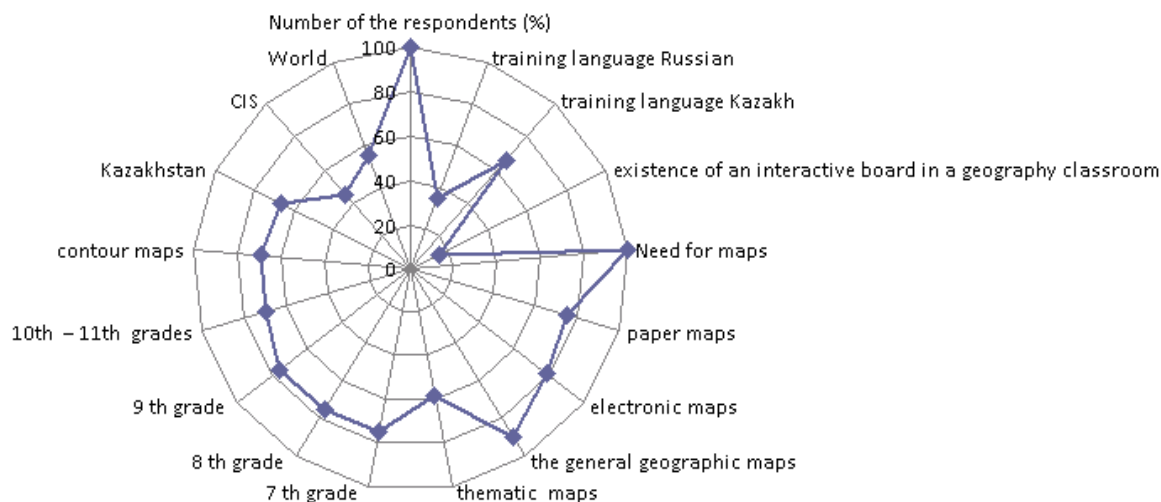

Figure 1. Results of the questionnaire of geography teachers within the project "The geo-info set of educational maps "Atlas ".

Equipping schools with geographic maps is quite low, which is evidenced by the 100% of the respondents who indicated the need for maps. 15% of teachers confirmed that they have interactive board in the geography classroom. 75% of respondents indicated the need for electronic maps, 73% in paper form, 69% indicated the need for contour maps. Among the maps on the territorial coverage 67% of respondents pointed to the need for maps of Kazakhstan, 53% - to the world maps and 45% - to the CIS maps. The need for maps for the 10th -11th grade was revealed in 69% of the respondents, 72-73% of respondents indicated the need for maps for the 7th -9th grades.
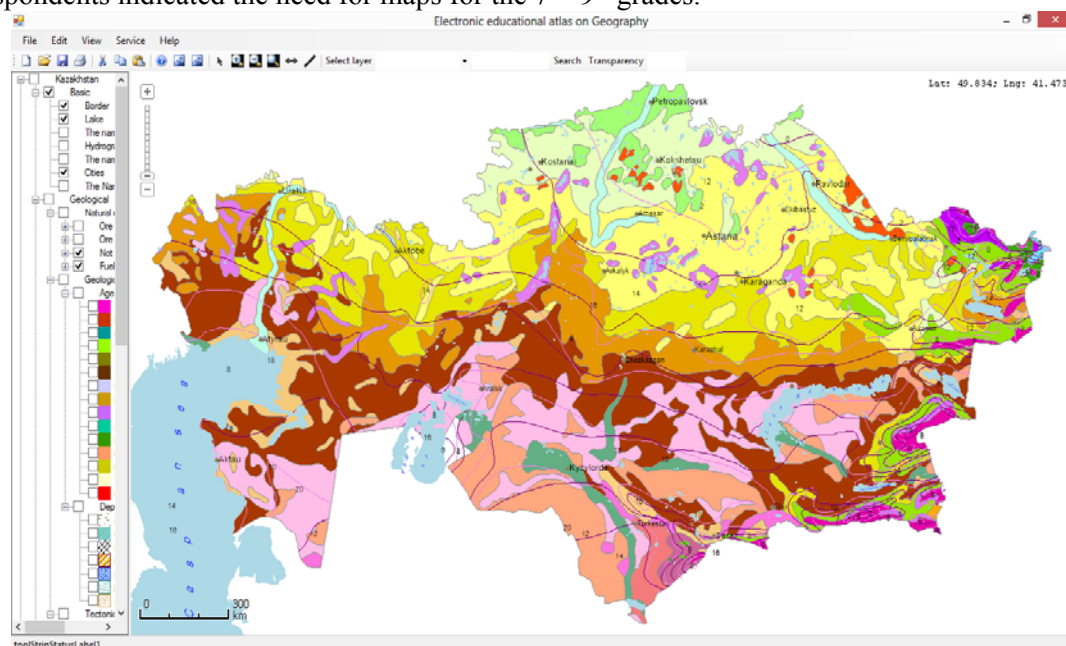
Figure 2. Screenshot in the mode of imposing of the soil map and map of spring temperatures of Kazakhstan.

Thus, after analyzing the questionnaires we had identified the need for the creation of a school atlas with in-depth thematic content for the territory of Kazakhstan.

The created electronic educational atlas in geography includes 80 vector layers for the school curriculum in geography, allows to use geo-information technologies at elementary schools. It provides to master the school geography curriculum, using interactive filling in and analysis of geographical maps, the creation of their own maps, the work with different kinds of contour maps, the creation of their own descriptions of geographical maps on the basis of the analysis of multimedia information objects.

The electronic educational atlas improves the effectiveness of the studying process, with the help of the usage of geo-information technologies in the salvation of the traditional and new geographical problems at geography lessons. Among those problems, there is comparison and analysis of the maps of different contents of the same area with the aim to find out the connection between climate and terrain, climate and vegetation (Figure 2).

Such kind of problems are difficult while using traditional maps, because they are based on several maps. The electronic educational atlas allows to solve the problem rapidly, and it helps a trainee to make such kind of analysis which developed skills of scientific work.

The developed electronic educational atlas in geography allows to help a teacher to solve the following problems in Kazakh, Russian and English:
- the usage of different models in class- digital maps, digital images;
- to put one kind of maps (layers) on the others, and also on geographical and physical map (Figure 3);
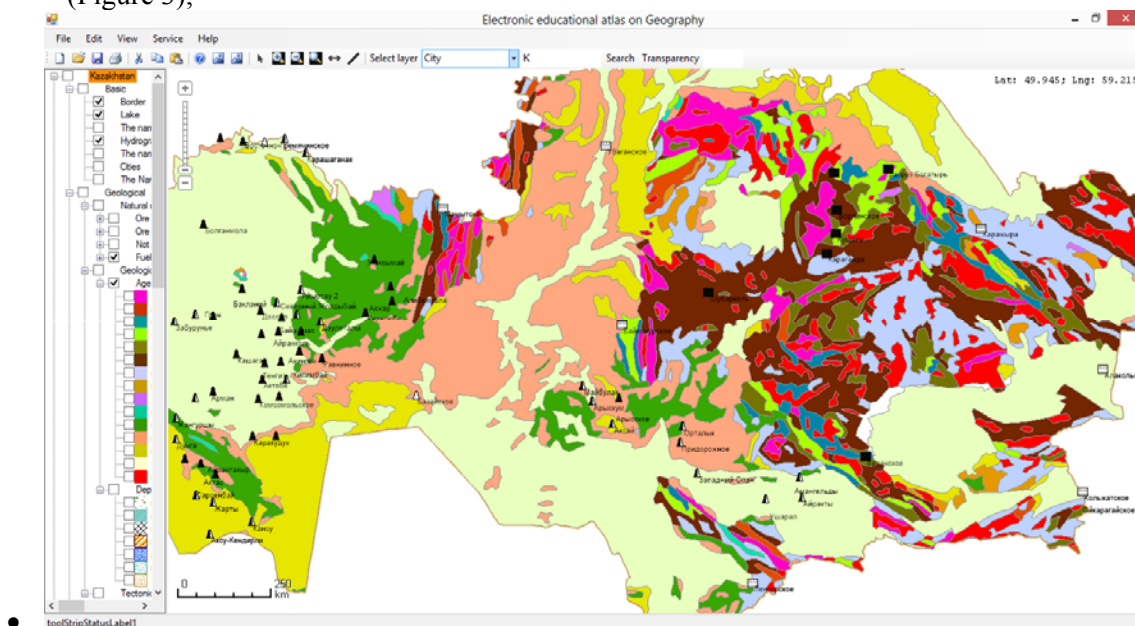
Figure 3. Imposing of the geological map and mineral resources map.

- to prepare the set of digital maps, including contour map, necessary for the practice;
- to change the size of mapping image on the screen with the goal of changing detailed placing of geographical objects and phenomena;
- to use the set of demonstration maps and diagram maps, place in the library of additional multimedia information.

While using the electronic educational atlas a pupil of school can do it in Russian, Kazakh, and English:
- to read geographical maps in digital;
- to measure on digital map;
- to fill in digital contour maps;
- to create his own digital geographical map;
- to analyze the statistics, placed in the library of additional multimedia information;

- to describe the connection between geographical objects and phenomena while using digital thematic maps of different content;
- to save digital map and multimedia information in a file, to print;
- the developed technology of creation of electronic maps and programming of electronic educational;
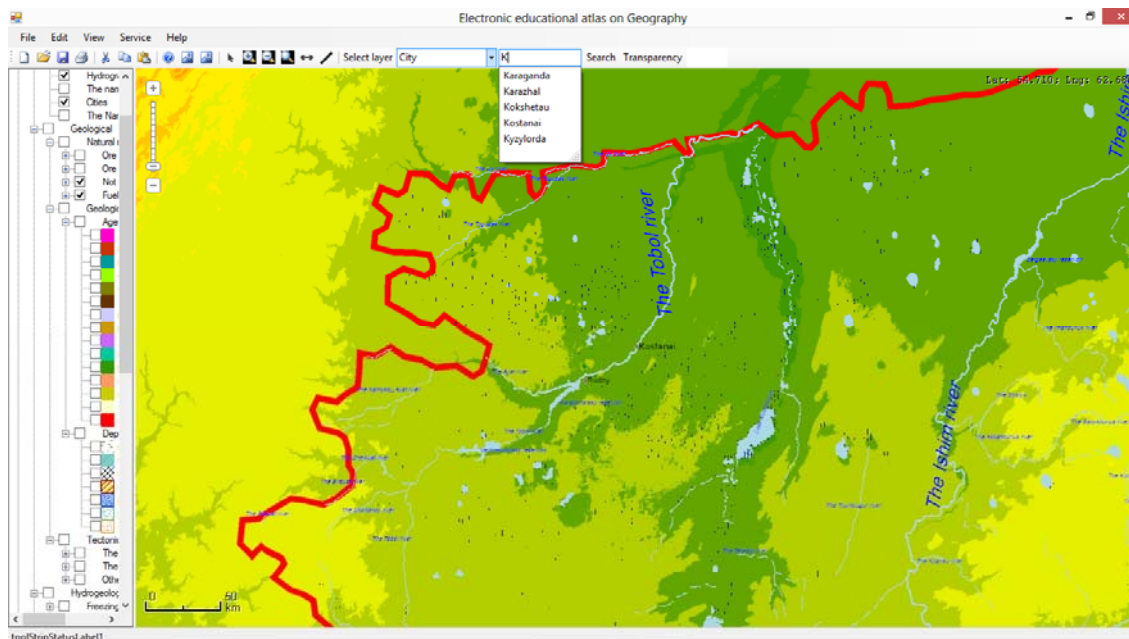- to search geographical objects on digital maps (Figure 4).

Figure 4. Screenshot in the mode of search the cities of Kazakhstan.

Atlas in geography apples a consequent carrying out of the operation:
- the storage, studying and analysis of the original material for digital maps;
- the transformation of digital maps to the unified mapping system of coordinates and projecting;
- the forming of digital map, scanning, attaching of the raster sound -proofing, putting thematic layer on typical basis, digitalization of contours;
- the development of inter face of program shell: the main window, menu, and tool instrument;
- the creation of data of attributive geographical information in 3 languages (Kazakh, Russian, English);
- the involvement, lightning of shape files of digital maps, placing of symbols;
- the involvement of multimedia information to digital maps of electronic atlas;
- the programming realization of legends of electronic atlas;
- the programming realization of functional navigation, searching, exporting, importing of shape files, measuring of geographical coordinates, stamps, forming and filling in contour maps.

While creating vector layers, the technical side is exact, as while working with raster all the aspects of mathematical basis of maps were taken into consideration. The system of coordinates of Pulkovo-42 with the protection- normal conical by Kavraisky was made for the maps of Kazakhstan and CIS. The developed vectoring thematic layers involve moderate generalization and object selection.

The approbation took place in schools of Kokshetau. Two groups totaling 96 students participated in the experiment: experimental - 48 students and a control group - 48 students of 8th grade of schools №1, №4 of Kokshetau. In the experimental group training was conducted with the use of an electronic atlas on geography. The results of the test in geography at the beginning of the experiment and at the end of the experiment are shown in (Figure 5).
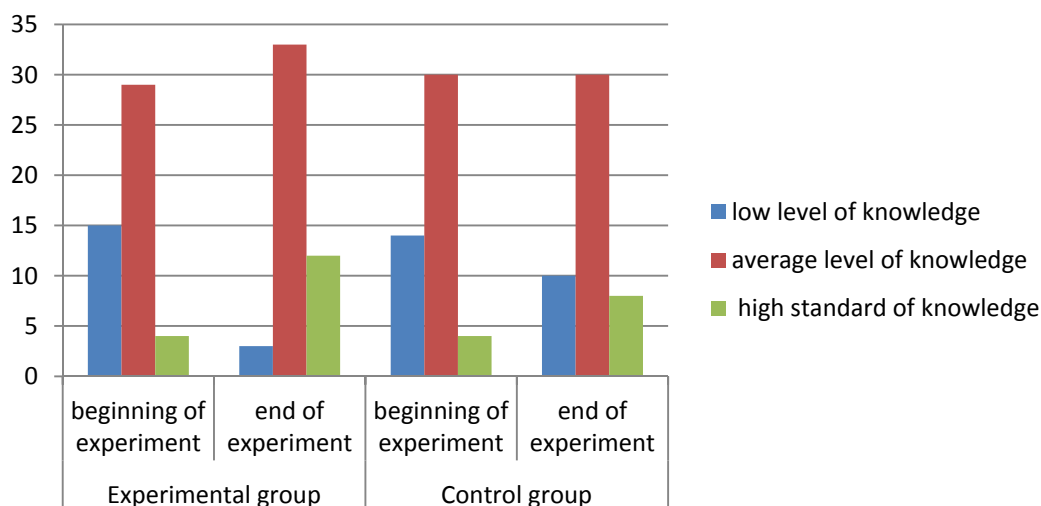
Figure 5. Results of control and experimental groups at two stages of the experiment on formation of geographical competences.

The experimental testing of the methods of geography studying with using electronic educational atlas showed its effectiveness.

The table program shell of electronic educational atlas is made with the library funding Open Source MapWinGIS ActiveX Map Control, (Welcome to the MapWinGIS…, 2015) and a programming language C# 5.0 in the environment Visual Studio 2013.

Conclusions

The using of electronic educational atlas prominently increases the teaching method, pupils of school learn new methods of working, including the peculiarities of modern scientific methods of geographical studying. They get basic skills and practice experience using geo-information technologies.

The created atlas adapted for school education will allow to intensify process of introduction of geo-information technology in the education, which promote achievement of the important purpose put in standards of education to a personal result of education.

The technology of development of electronic educational atlas may be used while preparing for school history course.

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Applied Mathematics as an Improver of Analytical Skills of Students

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Abstract: The development of analytical skills for prospective economic specialists is one of the most important competencies in a changing labour market and is one of cornerstones of the mission of higher education. A significant reduction of the mathematical unit in the Bachelor study program "Economics" increases the value of the course of applied mathematics as a means of academic development and in first analytical capacity of students. The study analyzes the impact of the course "Quantitative methods in economics" on the development of students' competence. The study intensity of the students and weak motivation just study calls for a change in the study process. Students' analytical skills develop if the study process is based on the student-centred and self-directed study approach using also the distant forms of studies. Modern applied mathematics assumes the combination in the study process of such traditional and innovative methods, tools, forms of learning as integrated lectures, professionally oriented set of practical exercises with the use of the computer. Complex of applied problems actualizes the realization of interdisciplinary connections at the level of knowledge and analytical work. The solution of tasks intensifies the educational-cognitive activity of students in mastering subject knowledge and skills as professionally significant qualities.

Keywords: higher education, analytical skills, applied mathematics.

Introduction

Higher education encompasses the imparting of knowledge in teaching-studying process for receipt of specific skills and wisdoms. In the same time the university education is only the springboard for purposeful further education throughout life and the first task of higher education is to create the preconditions for self-directed learning.

The aim of the Bachelor study program "Economics" is to provide students with the knowledge and skills necessary to be work-ready and competitive economists in the national and international labour markets; to promote research skills' acquisition; to develop analytical ability and skills and to prepare students for studies on higher education level. In the program the graduates receive the sixth level diploma in the European Qualifications Framework (EQF), the appropriate knowledge, skills and competence (Akadēmiskās augstākās..., 2016). Descriptors defining six levels of EQF: "advanced knowledge of a field of work or study, involving a critical understanding of theories and principles; advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study; manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups" (Descriptors defining..., 2016). All of these descriptors indicate on the necessary competences for student as prospective specialists.

Changes in society and economics require specialist training in order to make the best decisions in a changing environment. A specific feature of the work of an economist in modern society is to work in the conditions of lack of information, time and incompleteness of the initial data. The analysis of such information requires special techniques. Currently many tasks of planning and management, as well as a great amount of private applied problems are solved by methods of mathematical programming, many of which are implemented on the computer. In this case, the time for optimal decisions' taking is determined mainly by the type of tasks, professional knowledge and skills for solving tasks of optimization.

Bachelor of Social Sciences in Economics (240 ECTS) program also include the studies about some mathematics' methods: Mathematics for Economists (6 ECTS), Statistics (6 ECTS), Mathematic Statistics (3 ECTS) and Quantitative Methods in Economics (3 ECTS). That is only 7.5 % of total value of the study courses. "Unlike most other subjects, mathematical activity resides almost entirely within

the cognitive processes of a mathematics practitioner and is therefore difficult to characterise." (Samuels, 2012). Knowledge and understanding of mathematical approach to problem solving is an integral part of the general intellectual level of future economists.

The aim of the study is to analyse the applied mathematics "Quantitative Methods in Economics" (QME) course as an improver of analytical skills of the prospective economist. After completing QME the student must have knowledge and ability for optimal and environmental safety decision planning and carrying a process in economics; skills build and analyze the quantitative model of economic systems with MS Office Excel tool Solver and decision taking with Analytic Hierarchy Process (Koroļova, 2011). Applied problems are of interest to students because they reveal the mathematical nature of reality, they have educational and professional value. The implementation of interdisciplinary connections on the level of knowledge and level of activity is intensifying the educational-cognitive activity of students.

In business practice, the level of development of the analytical skills intelligently to decide, give a set of essential factors, to find a way out of difficult situations, prioritize, investigate and assess the situation, classify events, facts, plan and build a system of judgment and reasoning correctly in terms is an essential aspect of communication. Analytical skills are largely conventional and play an essential role in the ability of people to understand each other.

Strong analytical skills are a balance of analytical and synthetic activities of thinking. Basic components of analytical skills are represented in Figure 1.

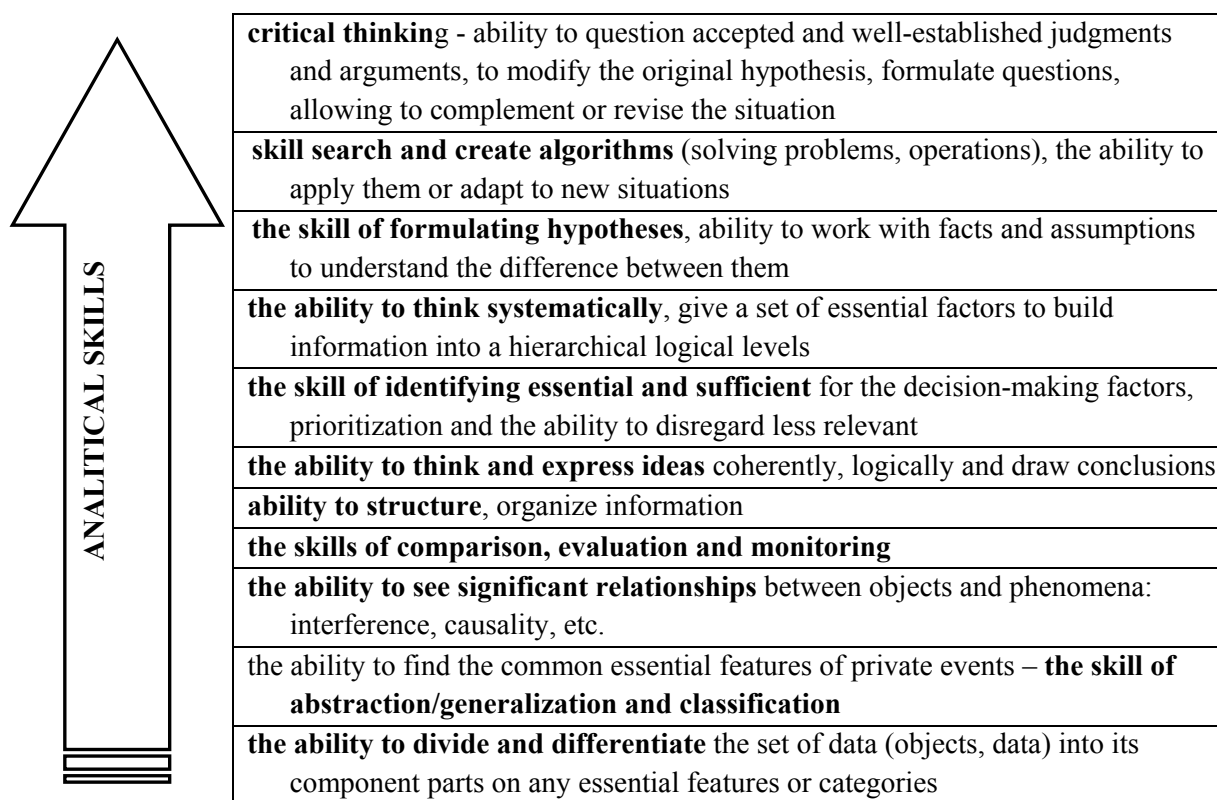| ANALITICAL SKILLS	**critical thinkin**g - ability to question accepted and well-established judgments and arguments, to modify the original hypothesis, formulate questions, allowing to complement or revise the situation
	skill search and create algorithms (solving problems, operations), the ability to apply them or adapt to new situations
	the skill of formulating hypotheses, ability to work with facts and assumptions to understand the difference between them
	the ability to think systematically, give a set of essential factors to build information into a hierarchical logical levels
	the skill of identifying essential and sufficient for the decision-making factors, prioritization and the ability to disregard less relevant
	the ability to think and express ideas coherently, logically and draw conclusions
	ability to structure, organize information
	the skills of comparison, evaluation and monitoring
	the ability to see significant relationships between objects and phenomena: interference, causality, etc.
	the ability to find the common essential features of private events – **the skill of abstraction/generalization and classification**
	the ability to divide and differentiate the set of data (objects, data) into its component parts on any essential features or categories

Figure 1. Basic components of analytical skills (author's construction).

For developing appropriate analytical skills students can use the tools that already exist in the relevant application area. For example, the practice of applying structured analytical approach to decision making in courses of applied mathematics. Study process during course QME carried on basic pedagogical principle - to study from simple to difficult and familiarity with appropriate tools and techniques.

Methodology

The study was carried out during 2014-2016 in Latvia University of Agriculture. Respondents are 84 the 3rd year full time students of the Bachelor study program "Economics".

Analytical skills of students were tested before study courses QME. There were three tasks: logical test with non mathematical chain; formation of linear one argument function; developing the simple algebraic algorithm. Evaluation of study course "Mathematic Statistics" during 2nd year of Bachelor program was used as a start level of analytical skill, too.

The combination in the study process of such traditional and innovative methods, tools, forms of learning, as integrated lectures, professionally oriented set of practical exercises with the use of computer, the complex applied problems in actualizing the implementation of interdisciplinary connections on the level of knowledge and level of activities intensify the educational-cognitive activity of students in mastering subject knowledge, abilities and skills, and in mastering professionally significant qualities.

The learning outcomes of QME course evaluated by four parts during pedagogic experiment:
- Linear and Integer Programming for optimal use of limited resources (40 %) – solving of analogous problems with analytic analysis;
- Critical Parts Methods and Linear Programming for optimal project planning (20 %) – solving of analogous problem;
- The Analytic Hierarchy Process (AHP) for optimal alternative decision in economics (20 %) – creative homework with on-line support - teacher consultations;
- The tests theory quantitative methods in Economics (20 %).

Methods of the study also are questionnaire pool and statistics' data processing (MS Excel, SPSS).

Results and discussion

Examination of analytical skills before QME study course display the situation in the beginning of the 3rd study year: correct formation of linear one argument function had 73 % of students, only 40 % developed the simple algebraic algorithm for problem solving, but logical test with non mathematical chain stayed as "secret". Those indicate the exigency to grow up academicals skills of students.

The relationship of the achievements of students between the courses of applied mathematics - QME evaluation correlate with evaluation of "Mathematic Statistics" (Spearman correlation 0.49, p-value<0,05). A positive correlation was also due to individual capabilities of students and specify the opportunities for growth their potential.

The study highlighted the following steps for solving optimization problems:
- analysis of the conditions of the problem;
- devising a mathematical model;
- in the form of mathematical models to determine which class is the task of choosing a suitable method of solution;
- solution of the problem according to the algorithm selected method;
- if necessary verification or investigation of the decision;
- formulation of response objectives;
- conduct analysis of the solution.

In accordance with the stages of solving optimization problems considered the following skills:
- to highlight the state of objects, their characteristics, task requirements;
- schematically write the problem statement (in the form of a table in Excel);
- read the problem statement, written in detail;
- to determine the relationships between variables;
- write an objective function, constraints, boundary conditions;
- to formulate a mathematical model of the problem;
- to determine to which class of optimization problems belong to this task;
- to select the appropriate method of solution;
- to apply the algorithm to solve the problem;
- provide economic or geometric interpretation of the solution;
- to develop the best plan for solving the problem;

- to give economic interpretation of the initial response;
- to select the appropriate method of decision analysis;
- apply the appropriate method of analysis to solve.

The need for further development of logical-mathematical intelligence, which as a unit of information uses a symbol system (Гарднер, 2007) indicates relatively low ability to formulate mathematical models.

For evaluation the developing of analytical skills during study course only results of two control tests were selected, excluding homework and theoretical tests. QME course evaluation results correlate (Spearman correlation 0.835, p-value<0.05) with evaluations of 1st test - mathematical modeling and solving problems with analytic analysis.

	Modelling	Excel	Analysis
MAX	70	70	60
MIN	10	10	5
– AVERAGE	41	34	26
□ MODE	50	30	20
◆ MEDIAN	40	30	20
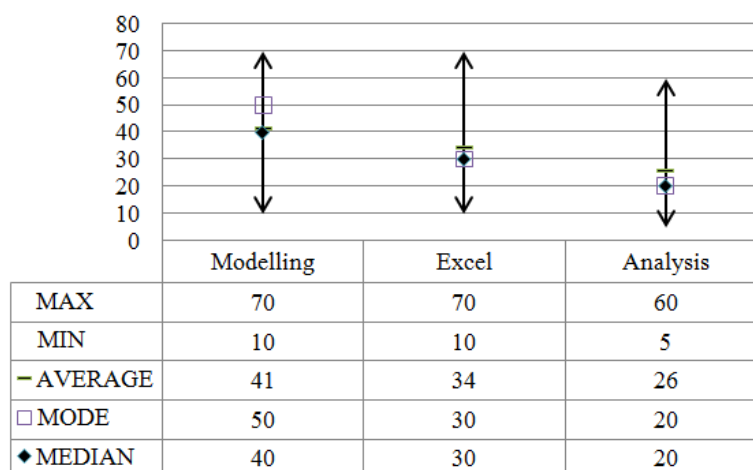
Figure 2. The complexity of modelling, solution with Excel and analysis of specific tasks according to students (%) in QME study course.

Most efforts in solving problems among students required mathematical modeling - the analysis of specific problem, devising a mathematical (symbolic) model and determining of which class is the task of choosing a suitable method of solution (mode 50, median 40) (Figure 2).

The evaluation of 1st test depends on the ability of mathematical modeling (Pearson correlation 0.66, p-value<0.01), the capability to analyze optimal decision and give economic interpretation (Pearson correlation 0.52, p-value<0.01), that was required in only one task out of three during 1st test in QME study course.

Distinct and quite significant difficulties (mode 30, median 30) for students are the forming table and decision of tasks by means of a computer in MS Excel (Figure 2). One of reason may be the exception course of "Informatics in economics" in study program for 2016 student group. Evaluations of the 1st test for 2014-2015 student groups significantly positive correlate with the evaluation of "Informatics in economics" (Spearman Correlation 0,516, p-value<0,05).

The 2nd tests results low correlate with 1st tests results (Spearman Correlation 0.27, p-value<0,05). This means that growth is possible even if no luck in the beginning of the course. Successful of the mathematical modelling during 2nd test weekly correlated (Pearson correlation 0.34, p-value<0.01) with the ability to create the algorithm during tests before QME course. When comparing the results from 1st and 2nd test 86 % of students observed significant positive dynamic growth of analytical skills.

Errors in decision making arise for several reasons: lack of information about the situation; inadequate evaluation of the received information; inadequate assessment of the situation based on the received information; incorrect method of solution; incorrect assessment of the consequences of decisions.

The main reasons of mistakes and unsuccessful results on student opinion in QME study course are the inattention (mode 50 %, median 45 %) and low motivation for better achievement (mode 50 %, median 28 %).

Some students noted the lack of time for communication during the course. The decrease in the mention of time constraints in the questionnaires was in the 2015-2016 academic year when the lectures were integrated in the laboratory work with the computer. Work only in small groups gives the opportunity to increase the time for analysis and discussion during the course.

Conclusions

A significant reduction of the mathematical unit in the Bachelor study programme "Economics" increases the value of the course applied mathematics as an improver of academic development and in first analytical capacity of students.

Most efforts in solving problems among students required mathematical modelling - the analysis of specific problem, devising a mathematical (symbolic) model and determining of which class is the task of choosing a suitable method of solution.

One of the reasons is quite significant challenges (mode 30 %, median 30 %) for students are the creation of the table and the solution in Excel can be an exception of course "Informatics in Economics" from the curriculum.

Despite the fact that only 73 % had correct formation of linear one argument function before QME study course, in general within three years of the study 85 % of students received an assessment of their work in QME above 50 % and 86 % of students improved analytical skills during this course.

The low intensity of study and weak motivation for better achievement calls for a change in the study process.

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Assessment of Students' Knowledge by Means of Tests

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Abstract: Assessment of students' knowledge by means of online tests is a relatively new method of knowledge assessment and control. It enables wide modernization and optimization opportunities of the tuition process. In this article, the authors try to address essential issues arising due to use of the tests: Do students treat filling the tests seriously? Do tests provide indeed objective results and what should be done to obtain them? The study method used at the paper is analysis of the mathematics test results. The results of study testify that using of different teaching methods is related to effective tuition process of mathematics.

Keywords: methodology of test development, review of the tests, higher education.

Introduction

New social conditions determine public necessity for independent, unbiased information about quality of the offered and the acquired education. Quality of students' competency also depends on the amount of the obtained knowledge of a discipline, mathematics in this case. New Information Communication Technologies (ICT) - based assessment system is being developed in parallel to the traditional students' knowledge assessment and control system in Latvia, where tests figure as means of pedagogical tool for measuring students learning progress. However, the attitude towards knowledge level assessment using tests is still ambiguous. Reasonable question arises: does testing provide unbiased results? We must acknowledge in this context that tests of today significantly differ from the ones used a few years ago. The theory of tests is one of directions in the pedagogy science, which is being developed very rapidly. Adherence to the basic rules of this theory allows one building test systems, which can be effectively utilized at different stages of the learning process. Here is attempt to address the essential questions in the article arising due to use of the test: 1) how do students and faculty treat utilization of the tests at tuition process? 2) are the results obtained by means of tests objective?

Methodology

Nowadays, computers and other information technologies increasingly enter everyday life and the field of education in this respect is not an exception. Information and communication technologies are increasingly used in the fields of higher education and tuition (Crampton, Vanniasinkam, 2010, 118- 128). Learning environment of the mathematics is also affected by the development of information technology (Galbraith, Haines, 1998, 275-290). Students and university graduates approve the use of ICT at universities (Breen, Lindsay, 2001, 95-114). In literature (Dunlosky, Rawson, 2013, 4-58), 10 main tuition methods are described in detail and their relative effectiveness is evaluated. Testing of the students is given as one of the main methods and is evaluated as highly effective one.

As usual, new ideas, trends and methods give rise to contradictory appraisal. Although the use of the tests can be considered a new method merely up to a point, one can still hear quite opposite feedback on tests, their usefulness, and objectivity of obtained knowledge assessment. Sometimes the same arguments are used from both sides, i.e., from those who are for and from those who are against the knowledge testing.

Arguments "against":
- tests reduce the role of the lecturer;
- tests prohibit from comprehensive assessment of knowledge and knowledge profundity of teachable persons, etc.

Arguments "for":
- tests decrease labour-intensity of the tuition process;
- tests enable objective knowledge assessment of tested persons, etc.

The question that have to be addressed within this article, might be read like this: "Do tests provide indeed objective results and what should be done to obtain them?"

Most often the testing per self does not induce any major problems. Major components of this process are:

- setting objectives of the test;
- selection of proper question type;
- exact wording of the question;
- evaluation and interpretation of the test results.

One must set objectives that should be achieved prior to start of creating the test (Appleby, Samuels, 1997, 113-131). If there are several objectives, their relevance has to be determined and least important ones should be eliminated, and an equal number of questions should be compiled for the each important objective.

When considering the type of question, the compiler should anticipate possible student errors in multiple choice questions (these are questions where students choose the answer from the provided options). Therefore, it is better choosing questions that students have to answer themselves. The question should be brief and clearly defined, with plain and easy perceivable wording. The question should be made in a manner that does not cause big problems for the student and it could be answered with aid of textbook, by reminiscing facts and algorithms (Boesen, Lithner, 2010, 89-105). It is even better, if the questions could be compiled in a manner, which enables verifying intermediate results and tracking errors (Seeman, 2015, 530-534).

Likewise, evaluation and interpretation of results is an essential component of the test because, without comprehensive analysis of the results, one cannot conclude what aspects should be addressed further, what are the ways for improvement of the tuition methods and quality of the learning process. The mathematical and statistical methods are widely used for evaluation of the test results allowing effective utilization of computers at this phase that enables automation and optimization of the intended tasks thereby.

This paper summarizes experience of the lecturers of Department of Engineering Mathematics of Riga Technical University (RTU) accumulated within recent years. The following statistics of results is obtained from the tests of first year students Faculty of Computer Science and Information Technology (FCSIT) from the last academic year (2014/2015). 413 students are enrolled in the course.

Results and discussion

Department of Engineering Mathematics of Riga Technical University compiled and implemented a series of tests at the ORTUS environment in recent years, which replaced most of the homework of the Term 1. First year students had to perform all in all 11 tests within a Term of last academic year (3 more tests were added this year). All tests are not labor-consuming; they contain 2-5 problems. Students must provide the right answer, not multiple choice, to all problems in all tests. Each test must be performed within 2 hours then the test is closed automatically. 3 attempts are allowed for each test, of which the best result is chosen for final rating.

As already mentioned above, the statistics of results is obtained from the tests of 413 first year students Faculty of Computer Science and Information Technology. Figure 1 shows the number of students who have performed the tests: the first bar indicates number of initial attempts taken (which corresponds to the number of students who performed the tests at least once), the second bar – the total number of attempts, the third – the number of students who gained highest possible rating.

It can be read from the diagram that number of the students who have performed the tests decreases: whereas first two tests were performed by 334, the last - by 227 students. There are two reasons: first, some students drop out of university in the middle of a term, second, students get tired and are less performing assigned tasks when term is running to an end.
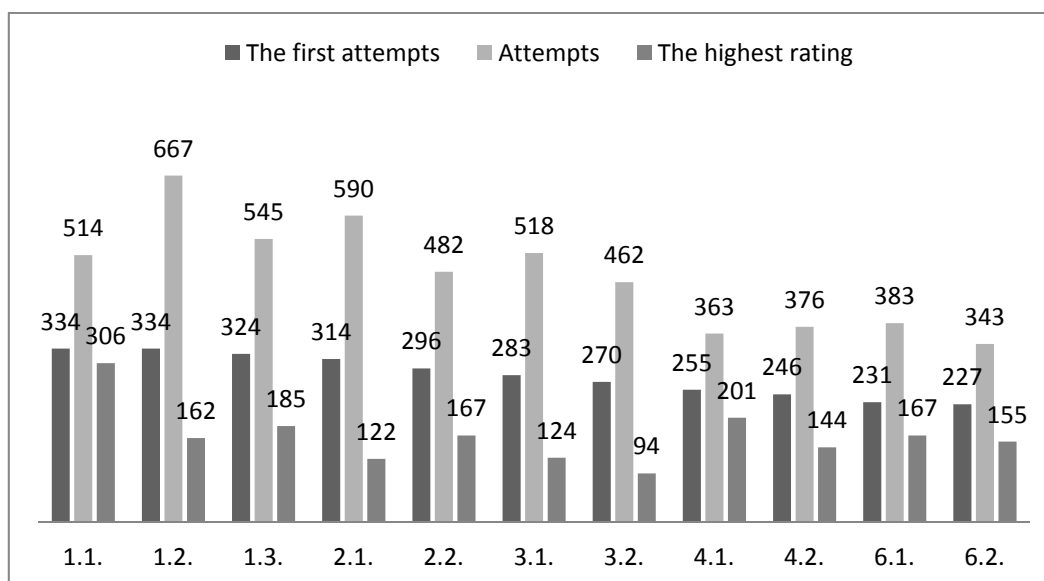
Figure 1. The number of students that performed the test.

The next diagram (Figure 2) shows the average rating of the tests (in percentage): the first bar – the average rating of the initial attempts, the second bar – the average rating of the all attempts, the third – the average rating of the last attempt, and the fourth – the average rating of the best attempt.
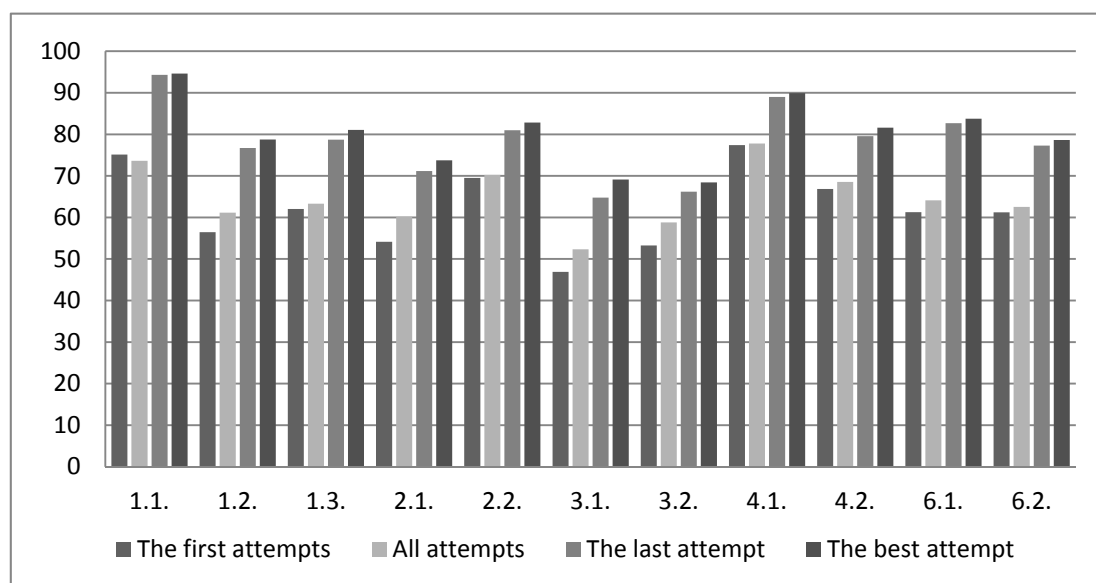

Figure 2. Average rating of the tests in percentage.

Considering all ratings of the tests put together, the following results are obtained: the average rating of the initial attempt is 62.2%, 64.78% - of the all attempts, 78.31% - of the last attempt, and 80.23% - of the best attempt.

We can conclude from the diagram (Figure 2) that generally the last attempt is the best one whereas the first attempt often is not the most successful one. The best results were obtained in the test 1.1 - "The Determinants" and in the test 4.1 - "The Limits" whereas the worst results were in both tests of Analytic Geometry; 3.1 - "The Equations of the Straight Line in the Plane" and 3.2 - "The Analytical Geometry of Space".

Comparing the number of students who got the maximum rating to the number of students that performed the test (Figure 3), we can see that more than half of the students came up with absolutely correct answer to 7 tests, whereas less than half of students gave correct answers to 4 tests.
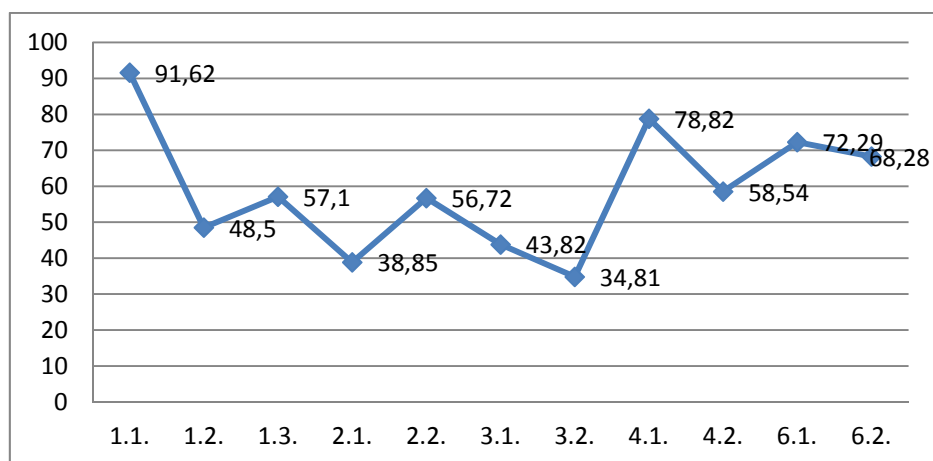
Figure 3. Number of students (%) who got the maximum rating.

Diagram of Figure 4 shows the standard deviation of the attempt with highest rating.
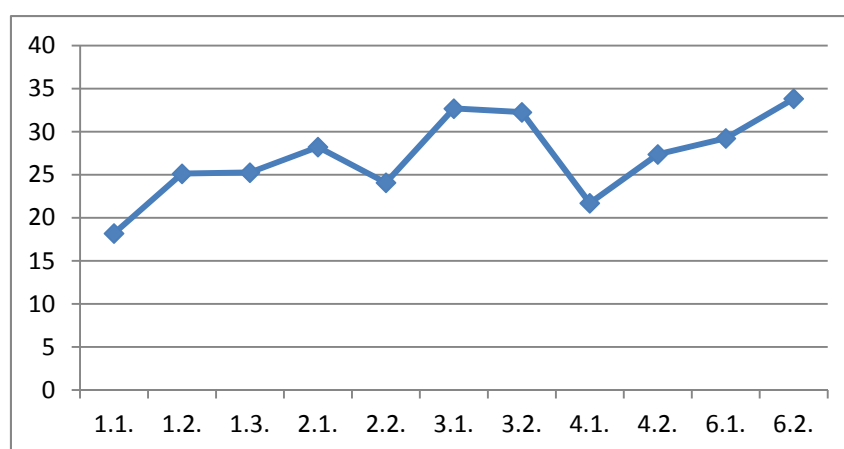
Figure 4. The standard deviation of the attempt with the highest rating.

Besides, the 11 tests above, which replaced the homework, here are 23 tests of the theory and 23 tests of the math tasks for the Term 1, and 15 tests of the theory and 15 tests the math tasks for the Term 2 that have no time and attempts limitations. Students must choose one of four answers in these tests.
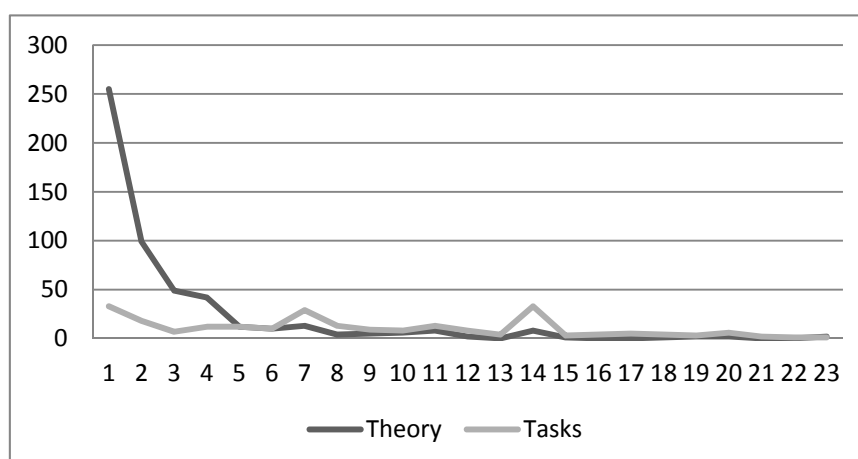
Figure 5. Number of students who performed the tests of the Term 1.

Unlike the above, these tests are for training and self-testing purpose, results of which do not affect the students' Term grade. As statistics indicate (Figure 5), students hardly ever are performing these tests. If 255 students performed the first theory test and 33 students - the first math task test, then no one performed several theory tests and only some performed the math task tests at the end of the Term.
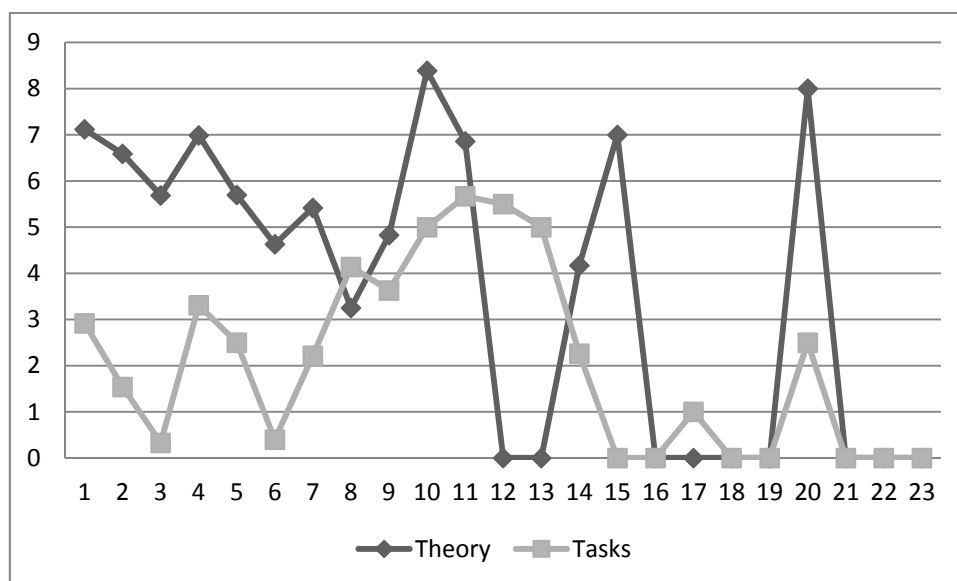
Figure 6. Test results of Term 1.

When reading results of the performed tests (Figure 6), we can conclude that the results of the theory tests are pretty good, while the grade of math task tests generally is less than 4 points out of 10 possible. One can get the impression that most of the students opening these tests are rather randomly choosing the answer than solving the problem. Here is an easy explanation: it is easy giving the right answers to the theory tests if one knows topic well, whereas answering of math task tests requires more efforts, i.e., all 10 tasks should be resolved.

The number of students that performed the tests on Term 2 is even smaller (Figure 7). Likewise on Term 1, the trend remains the same: if 37 students performed first theory test and 27 students - the first math task test, then no one performed the last three tests.
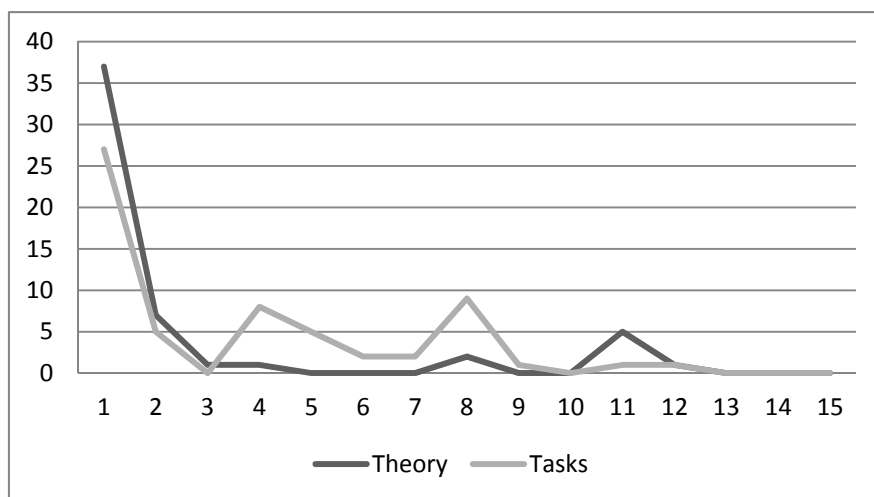
Figure 7. Number of students who performed tests on Term 2.

Conclusions

Considering the data above, we come to the following conclusions:
- students prefer performing the tests rather than handing-in the homework in writing to the lecturer;
- more than half of the students who perform the tests repeatedly, are training to solve the problems and are gaining highest ratings as the result;
- students hardly ever are performing tests that do not affect the final grade of the term;

- students prefer performing the tests where answer can be found by logic, whereas they dislike performing the tests, which require labour-intensive solution of a problem;
- comparing the students' test results with results of quizzes and exams, prevalence of congruence is observed – students who show good results in the tests, are successful at other assessment tests;
- test system noticeably lightens the work of the faculty.

Certainly, assessment of students' knowledge by means of testing cannot be the only evaluation method, though properly compiled tests and proper evaluation system of the results in combination with other assessment methods provide objective results.

Answering the questions brought forward at the introduction, we can state that:
1) both the students, and the faculty treat utilization of the tests at the tuition process positively;
2) the properly compiled and utilized tests are providing objective results in the most of cases.

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Foreign Languages for Professional and Academic Purposes

Active Teaching/learning as Urgent Need in Contemporary Education for Sustainable Development

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Abstract: The main aim of this study was to search for effective ways and methods of teaching on environmental issues. A review of the literature was done, considering the information on the state of the human environment and modern teaching methods. Own teaching experience has enabled the development of some exemplary forms of action to involve the students to engage in the acquisition of knowledge in classes on sustainable development. The study refers to the degradation of ecosystems, which are the basis of life and human welfare. It emphasizes the need to seek effective methods of education for sustainable development, stresses the difference between that and the environmental education. Considering the reasons for the need to introduce active methods of education, the authors show examples of their use. They also underline the importance of motivating and inspiring both students and teachers alike. Taking into account the need for international cooperation in creating a sustainable development reality, the authors highlight the value of effective language education by showing its capabilities on the example of ESP *(English for Specific Purposes)* and CLIL (*Content and Language Integrated Learning*).

Key words: education for sustainable development, active education, ESP, CLIL, higher education.

Introduction

No specific actions and initiatives to protect the natural, energy and biological resources of the Earth were undertaken until the end of the 60s of the previous century. A significant change in this respect started a decade later, and in developed countries alone. Through a series of reports, meetings and conferences (like U'Thant's report, the conference in Stockholm, and the "Summits of the Earth" in Rio de Janeiro, Johannesburg, Rio +10) the assumptions of sustainable development of civilization were developed and some rules to implement it.

The process of getting people to know these principles, accepting them against overwhelming super consumption and integrating them with the model and culture of behaviour is very slow. Meanwhile, the risks associated with the impact of human activity on the natural environment continue to grow. Human activity is such a burden to the Earth that it can no longer be assumed that the planet's ecosystems will be able to ensure the conditions for the future generations to live. Today, already 60% of the world's ecosystems undergo degradation or are used in a way threatening their sustainability (Guide to…, 2015). The effects of human activities on the environment exceed the planet's capacity to regenerate by about 25%. The rate of consumption of the resources and biological diversity in ecosystems exceeds the ability of the ecosystems to regenerate and absorb the waste produced by *Homo sapiens*. Human activity also intensifies the serious global threat connected with the climate change. Many international documents and studies raise the issue of the need to speed up the commitment to change the daily routine to relieve the ecosystems, deepen social ties and improve the economy organization. What could help is the broadly understood education for Sustainable Development.

The aim of the study was to present effective ways and teaching methods in environmental issues and sustainable development.

Metodology

Material for the paper was sought by reviewing the literature and considering the information on the state of the human environment and modern teaching methods. The years 2010-2015 brought some experimentation in English classes consisting in gradual implementation of listener involvement methods. Own teaching experience has enabled the development of some exemplary forms of action to

motivate the students' engagement in the acquisition of knowledge in classes on sustainable development.

Results and discussion

Education for Sustainable Development

Education for Sustainable Development (ESD) is a much more complex task than, for example, environmental education, about which so much has been written in recent years. The years 2005-2014 were proclaimed by UNESCO the Decade of Education for Sustainable Development (DESD) (United Nations Decade…, 2007).

ESD, is the education that: (1) enables people to foresee, face up to and solve the problems that threaten life on our planet, (2) disseminates values and principals that are the basis of sustainable development such as: gender parity, social tolerance, poverty reduction, environmental protection, natural resource conservation and just and peaceful societies, (3) highlights the complexity and interdependency of three spheres: environment, society (including culture) and economy. This should lead to a world where everyone will have the opportunity to benefit from education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation.

Many projects and action groups, such as Lola, CEO, WARTA, KOS (Thoresen, Jégou, 2009; CEO, 2015; Rozenbajger, Kostecka, 2012; Kostecka, Piersiak, 2015) supported the programs and tasks of the Decade, namely (a) Promoting and improving quality of education requisition of lifelong learning and skills and values needed by citizens to improve their quality of life; b) Reorienting curricula: from preschools to higher education, education must be re-thought to become a vehicle of knowledge through patterns and values needed to build a sustainable world; c) Raising public understanding and awareness of the concept of ESD – and demonstrate how to put it in practice; d) Educating the employed: managers and workers in trade and industry to enable them to adopt sustainable modes of production and consumption.

The latest encyclical of Pope Francis Laudato si ' (Encyclical Letter…, 2015) is an important and very inspiring appeal for the responsible participation in the use of the planet's resources. It was written in the third year of his pontificate and refers directly to the tradition of St. Francis of Assisi. It bears the date of Pentecost Sunday (24 May 2015), being probably a conscious reference to the spiritual impulse that has not yet been sufficiently exploited by man in the right way.

The encyclical is dedicated to protecting all forms of life on our planet. It is the first Vatican document in many years that deals with the major problems of all humanity, not just Christians or Catholics. After all, environmental protection is a global problem that can't be solved by single states or nations. It applies to the entire human population, in which various groups are significantly more aggressive in relation to others. Human population is firmly committed to self-destruction in its various forms, and the destruction of the natural environment is one of them.

Challenges of contemporary education

Many authors emphasize that a new methodology of teaching is needed to achieve important goals in the plane of creating knowledge and culture of Sustainable Development. In view of the huge number of stimuli in the environment of the modern student and the pace of change they observe and experience, the right incentives are needed to engage them effectively in learning. This applies to all levels of education - primary, secondary and tertiary, as well.

Generally, it seems that people want to be motivated mainly by the promised rewards of pragmatic character (financial awards, promises of material benefits). Not many people mention humanitarian awards or those connected with social engagement. However, the present research conducted on the students of Rzeszów University and Bialystok University of Technology, Poland, shows that students choose the attitude of "to be" as a priority in life (83%) (Figure 1) and are ready to accept severe austerity in favour of slowing down the transformation of resources (56%) (Figure 2).

According to the research, the respondents would make an effort to change their old habits into the pro-environmental ones mainly due to (when choosing one reason as the main one) being aware of the threats of the ecosystems (Table 1).

So, there are many sensitive people, who should be properly directed, educated and presented with arguments and reasons. We need to find a way to their emotions and interests, getting through the barriers of consumption, confusion, egoism and ignorance.
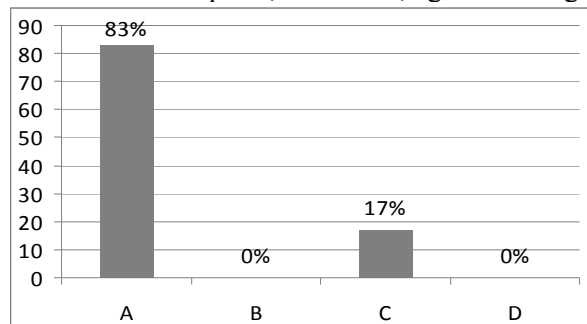
A - Attitude „to be"; B - Attitude „ to have"; C - I do not know; D - No difference

Figure 1. Attitudes selected by respondents as priorities in life [%] after J.Kostecka et al. (Kostecka, Mazur, 2010), changed.
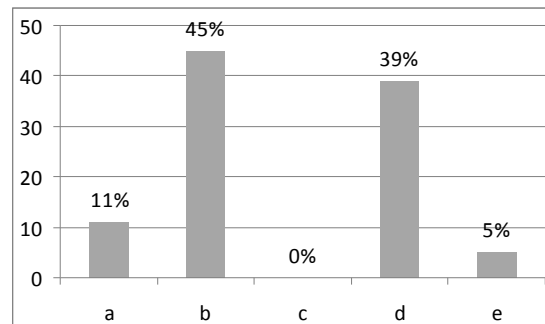
a - Definitely yes; b - Yes; c - Definitely not; d - Not; e - I do not know

Figure 2. Number of respondents who would be ready to accept austerity in favor of slowing down the transformation of resources (%) after J.Kostecka et al. (Kostecka, Mazur, 2010), changed.

Table 1

Respondents' answers to the question: What would persuade you to make an effort to use the principles of sustainable development in everyday life activities?

(Rate the reasons from 1 as most important to 4 as least important to you)

Question / Respondent	University of Rzeszow				Białystok University of Technology			
Rating [%]	1	2	3	4	1*	2*	3*	4*
Financial encouragement	22	28	25	25	8	17	12	12
Law regulations	8	36	33	23	6	14	20	6
Sense of environmental hazard	67	17	14	2	20	12	8	6
Social pressure	3	23	27	47	14	6	3	17

* some students did not answer all the questions;   after (Kostecka, Mazur, 2008), changed

Life Sciences with their conceptual apparatus do not protect the ecosystems of the world. Rapid changes in culture are also needed, supporting the understanding of the existing threats and the commitment to stop them for the sake of the whole humanity. More and more people believe that the planet can survive only if the spirit and ethos of asceticism is adopted. Of course, its size is not clearly defined and can manifest itself eg. through various forms of slowing down the conversion of material resources and ecosystems (Kostecka, 2013). We need a slowdown, detachment, but also a vision of communion and mutual dependence between us and nature, with the realistic approach to reduce consumption of natural resources and energy wastage as well as reject the consumerism overpowering the world.

How urgently should the vision of caring for the common home be implemented? As the world is a set of connected vessels, we need a comprehensive solution. What is required is a comprehensive and honest dialogue of politicians, scholars, economists, authorities, environmental organizations, religions at the global level but also individual people-the citizens of the planet. For such a dialogue to be possible, it is necessary to change the mentality at the level of properly and quickly educated individuals. We must understand, accept and implement the following message in the organization of everyday life: "*Ecology*

and environmental protection today is not only sewage treatment plants, filters on chimneys, biofuels and segregation of garbage - it is mainly about cleaning up our minds and souls ..."

If we live our life with such mindset, it will be easier to motivate young people to explore the complexities of the world around us and use the earth responsibly. External motivation will then be transformed easily into the internal one making teaching and learning more efficient, while emotional relationships will help the durability of memory. In this respect, any forms of teaching close to nature are very useful. Good examples are green classes for high school students or well-organized field trips for students of different faculties (Butt, Kostecka, 2010).

Active Education for Sustainable Development

As stated above, effective learning of sustainable development basis, has assumed a new and significant meaning. As a result, the emphasis will be on reforming the style of working between teachers and students. Active methods of teaching and learning allow for the acquisition of knowledge in an interesting manner, learning problem solving skills, stimulating interests and creating new experiences including interpersonal ones.

According to Dale, we are able to remember only 10% of what we read or hear. However, 50% of what we see or hear and even 90% of what we say while performing a given activity is remembered. It is important for the process of learning that a teacher and a student should be engaged emotionally. It shapes internal motivation to make an effort to remember and store the acquired knowledge. Acquisition of the material becomes easier when there is an interest on a given issue and the understanding of the resulting benefits. Hence the need to emphasise active teaching methods not only during activities in the form of exercises but also as breaks in such tiring learning processes like lectures.

Active learning methods may be divided into: (1) methods of self-acquisition of knowledge (relying on discovering); (2) adjustment methods (relying on experiencing something); (3) practical methods (relying on actions).

In order to make activities attractive and interesting for students, the methods of active teaching ought to be changed. It has been confirmed that thanks to this type of approach, the knowledge acquired becomes more durable than in the case of a more traditional model of teaching. The discussions conducted, for example in groups, allow students to share their own viewpoints, combine knowledge, imagination and creative thinking of all participants and provoke greater individual achievements.

The essence of active teaching methods is the advantage of multilayer learning effect over teaching methods, where a STUDENT - in learning - exploits active education methods since they lead to durable changes in thinking and acting, to gain new experience whilst the TEACHER - in teaching - educates a student and himself since in using these methods there is a mutual impact on both the teacher and the student.

By breaking the monotony of a lecture, we can add some variety using the following suggested methods and their effects:

Academic discussion method - i.e. an exchange of ideas, opinions, thoughts and attitudes of a group of participants over a given subject. This is an art of expressing oneself, supported with arguments and an attempt at working out a common idea, while respecting the opinion of others. A topic for discussion might be like this: "Did contemporary media implement the Decade of Education for Sustainable Development", "What does social participation mean to you".

Panel discussion method - its feature is the co-existence of two groups: discussants (experts) and listeners (audience). The chairperson supervises the proper course of discussion. The audience may not only ask questions, but also present their opinion and complement the discussion etc. This method may support a lecture expanding the previous subject as it requires previous factual preparation by students. A typical issue would be: "Usefulness of the principles of sustainable development in contemporary reality", "Does Polish law support and promote social participation in solving problems according to the concept of sustainable development".

Discussion assessment method - traditional assessment of students may be replaced with this method. A table in which all students will be entering scores for fellow participants need to be prepared prior to the lesson. Students should be informed about the rules i.e., they should know the time limit and principles of discussions, know what they can obtain pluses and minuses for. The topic and plan of the discussion can be written on the board. The teacher intervenes when the discussion disappears. Another issue could be: "How to implement sustainable travelling", "How to run a sustainable kitchen".

"Brainstorming method" - perceived as a technique for individual, group and creative thinking. This is also called a market of ideas or session of deferred evaluation. Ideas are suggested by the entire group. The ideas are considered and written down without limitation (even if for the moment, they may seem unjustified), they are treated as steps to innovative solutions of the problem in the nearest or further future. This method may be applied e.g. when there is a need to resolve a difficult problem within a short-term period. The result may be development of proposals in the form of a report - a short, concise and concrete information. For example: "How to be happy in the modern world", "Is sustainable development needed", "Ways to reduce impediments to the implementation of sustainable development", "How to create social participation and responsibility in sustainable life".

Snowball method - allows each student to express their opinions on a given subject and develops skills of negotiation, reaching agreements and formulating thoughts. At first, the students solve a given problem individually. Then, in twos, fours or eights etc. they try to work out a common agreement. Finally, they work out a point of view for the group. For example: "The most representative attribute of sustainable development", "The most effective teaching method", "Favourable assessing method".

Short debate - it is an opportunity for analysing arguments "for and against". The teacher divides students into two groups and provides the subject and timing of the debate. Then, after opening the floor, he assesses the quality of arguments and power of conviction. Example: "How to solve a presented conflict".

Active methods of teaching may also include valuable case studies understood as the analysis of a so called situational description. Its essence relies on presenting a given phenomenon, an event or situation, in which there is a given organisation, enterprise or institution implementing sustainable development, then seeking indispensable data which may allow its analysis as well as formulate possible solutions and consider their consequences. Presentation of a decision-making situation should be illustrated in such a manner so as it encourages students to formulate and undertake variants of alternative solutions. Particular attention should be paid to the preparation of varied solutions in case studies. In creating the understanding of sustainable development, an assessment of consequences of each of the possible solutions should be made taking into account the ecological, social and economic aspects of the decisions.

In concluding analysis of case studies, it is essential to make the best choice i.e., most favourable of solutions along with its justification so the case would be considered strategically closed in its entirety.

One of the goals of the above-mentioned forms of education is to make the students believe in the causative power of their involvement. Hence the need of building self confidence in young people, which can be defined as the ability to believe and have trust in oneself to be able to achieve anything, no matter the odds or difficulties (Joseph, 2015). Self-confident people are usually fast and effective learners with clear and logical thinking and good memory. And these qualities can be trained with the help of mind maps.

Mind maps have been with us for about forty years now but not many people really know them and, what is more important, actually use them. T. Buzan (2015), the inventor of mind maps, believes they are a perfect thinking tool. With mind maps students employ their imagination and creativity for brainstorming thoughts and ideas and organising them, taking notes from books and lectures, preparing for exams, revising the material, preparing topics for written projects, presentations and discussions. They are about engagement, creativity and fun, the necessary constituents of effective learning.

According to K. Robinson (2006), a renowned author, speaker and international advisor on education, creativity and imagination are what the world needs most today. In his famous talk "*Do schools kill creativity*" he expressed his concern about education and the environment. He argued that "our only

hope for the future is to adopt a new conception of human ecology, one in which we start to reconstitute our conception of the richness of human capacity. Our education system has mined our minds in the way that we strip-mine the earth: for a particular commodity. And for the future, it won't serve us. We have to rethink the fundamental principles [of education]".

International cooperation in education for Sustainable Development

Protecting the environment is a global problem concerning the entire human population. To solve the current emerging issues and problems usually a quick response is needed. Then international experience and willingness to share solutions proves to be very helpful. It is clear that cooperation is only possible when people involved can communicate using the same language. SD must be built by all the inhabitants of the Planet not only individual states or nations. So apart from the effective methods of education for SD, effective methods of language teaching are equally important. Two complementary approaches to language teaching seem to be very useful here, namely ESP (*English for Specific Purposes*) (Laurence, 1997) and CLIL (*Content and Language Integrated Learning*) (Mehisto, Jesus-Frigols, 2008).

T. Hutchinson's and A. Waters' definition (Hutchinson, Waters, 1987) states that "ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning". The idea was further developed by T. Dudley-Evans (1998). In his understanding of the notion, English for Specific Purposes meets specific needs of the learners, making use of the underlying methodology and activities of the discipline it serves and operating on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre. ESP may be related to or designed for specific disciplines mostly studied by adult learners from intermediate to advanced levels.

Content and Language Integrated Learning (CLIL) is a competence-based teaching approach that is gaining ground in European education systems. The idea is to teach both the subject and the language, and is captured in the phrase "using language to learn, learning to use language." CLIL encourages the use of curricula which promote the right interpersonal skills, cultural sensitivity and communication and language abilities which are in demand by today's employers (Schumacher, 2015).

One of the most common concerns for CLIL teachers is the lack of appropriate materials for their classes. It is difficult to find useful materials for the levels they teach or adapt foreign resource materials. And it takes a lot of time. Increasingly, publishers are producing resources for specific countries at primary and secondary schools. However, not many such materials exist at the university level. Academic teachers are obliged to adapt foreign resource materials from subject-specific course-books. In CLIL most subject materials need adapting due to the complexity of the language used in the instructions or in the activities themselves. For the purpose of teaching students for sustainable development, one may also use an example of sources presented for teaching mathematics by U. Dudziak and A. Król (Dudziak, Król, 2012).

The aim of the next section is to deal with the challenges of CLIL itself and also of the lack of materials in the field of education for sustainable development at university level.

As it was said, CLIL stands for Content and Language Integrated Learning. It consists of teaching a subject through the medium of a language other than that which is normally used. English is the most common language medium through which the process of learning in CLIL is achieved. In CLIL courses, learners acquire knowledge of the subject while simultaneously learning and using the foreign language.

It is important to notice that content is the primary concern in CLIL. This is important as curricular content should lead in the language learning process. When preparing lessons, teachers need to analyse the lexical and cognitive demands of the topic and where necessary focus on the English the students will need in order to understand and participate in the lesson.

Applying CLIL for sustainable development workshops

In this section diverse activities adequate for CLIL in the context of sustainable development workshops are presented. These are examples of how SD content may be embedded into CLIL. These activities derive from general CLIL methods (Deller, Price, 2007) and are adapted to be used in SD but they may

also be applied to other subjects. These methods are intended to be used during workshops but some of them may also serve as a stimulus for lecturers.

a/ Crossword puzzle

Aims: memorizing key words, writing definitions and descriptions, asking and answering questions, translating.

Preparation:

1. Write a list of about a dozen words you want your students to recall and memorize: **these words are connected with sustainable development: economy, ecology, culture, communication, future, politics, resources, society, global, local, environment, justice, wellbeing, participation**

2. Prepare descriptions for each word (Table 2). Cut them up and do a matching exercise, where each student is given a term or a definition, they have to mingle and find a match.

Table 2

Words and their descriptions to be cut up and mixed

No	Term	Description
1	Society	The aggregate of people who live together in ordered community
2	Future	The time or a period of time regarded as still to come
3	Resources	Something which is accumulated in certain amount to use in the future or reserves
4	Culture	Tangible or intangible creations such as patterns of thinking and behaviour and arts or other manifestations of human intellectual achievement regarded collectively
5	Local	Adjective which describe something belonging or relating to a particular area or neighbourhood
6	Participation	The action of taking part in something
7	Well-being	Term for the good or satisfactory condition of an individual or group, for example their social, economic, psychological, spiritual or medical state
8	Communication	The connection between people and imparting or exchanging of information or news
9	Global	Adjective describing or relating to the whole world; synonym of "worldwide"
10	Politics	All activities which are associated with the governance of a country or other area
11	Ecology	The branch of biology that deals with the interactions and relations between organisms and their surroundings or habitat
12	Justice	The ethical and legal concepts signifying traits like righteousness, fair and right conduct.
13	Environment	The surrounds which includes living things and natural forces and which consists of the interactions among plants, animals, soil, water, temperature, light, and other living and non-living things
14	Economy	Science which analyzes and describes the production, distribution and consumption of goods, wealth and resources of a country or region mainly by using quantitative methods

Source: Own elaboration

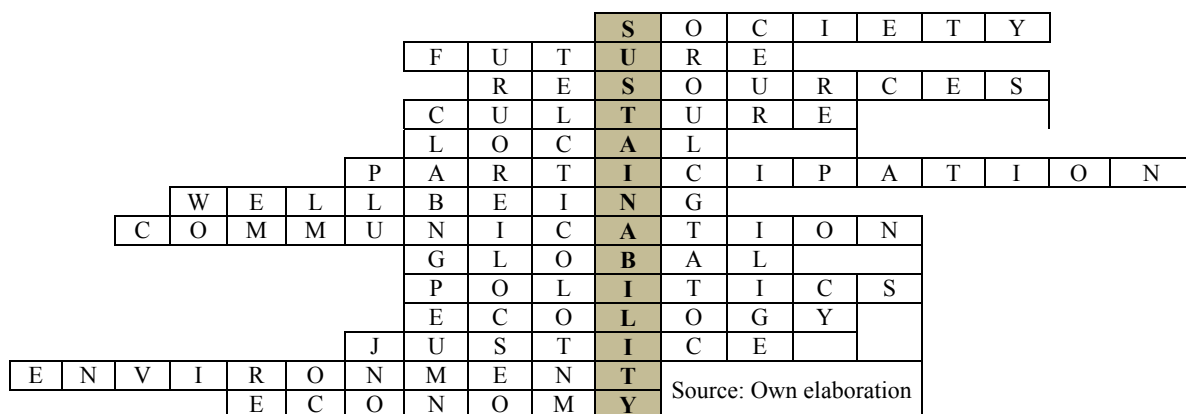3. As a revision exercise, students are asked to prepare a crossword puzzle, which might look like Figure 3.

					S	O	C	I	E	T	Y	
		F	U	T	**U**	R	E					
			R	E	**S**	O	U	R	C	E	S	
		C	U	L	**T**	U	R	E				
		L	O	C	**A**	L						
	P	A	R	T	**I**	C	I	P	A	T	I	O	N
W	E	L	L	B	E	**I**	N	G
C	O	M	M	U	N	I	C	**A**	T	I	O	N
		G	L	O	B	**A**	L
		P	O	L	**I**	T	I	C	S
		E	C	O	**L**	O	G	Y
	J	U	S	T	**I**	C	E
E	N	V	I	R	O	N	M	E	N	**T**
	E	C	O	N	O	M	**Y**

Source: Own elaboration

Figure 3. Using presented words and descriptions to prepare a crossword puzzle.

Having finished the crossword puzzle, the crossword entry "Sustainability" needs to be explained as a term that is a part of the concept of sustainable development presented by Brundtland Commission of the United Nations on March 20 in 1987: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, Khalid, 1987).

b/ Student-generated word puzzle

Aims: memorizing key words, writing definitions and descriptions, asking and answering questions, translating.

Preparation:

1. Write a list of about **14** words you want your students to focus on: **these terms are major challenges of environment and development: economic disparity, climate change, poverty and hunger, diseases, loss of natural resources, water scarcity, population growth, loss of biodiversity, political instability, soil erosion, deforestation, pollution, consumption, urbanization**

2. Put them in a chart in any order as in the example below.

3. Divide the chart in half horizontally across the middle so that the two halves look as Table 3:

Table 3

Explaining SD terms

	Term	Student's definition, explanation or clue		Term	Student's definition, explanation or clue
	Puzzle A			Puzzle B	
1	ECONOMIC DISPARITY		8	LOSS OF BIODIVERSITY	
2	CLIMATE CHANGE		9	POLITICAL INSTABILITY	
3	POVERTY AND HUNGER		10	SOIL EROSION	
4	DISEASES		11	DEFORESTATION	
5	LOSS OF NATURAL RESOURCES		12	POLLUTION	
6	WATER SCARCITY		13	CONSUMPTION	
7	POPULATION GROWTH		14	URBANIZATION	

Source: Own elaboration

Procedure:

1. Put the students into small groups. Ask half the group to fill in 'Puzzle A' and the other group 'Puzzle B'. Ask them in their groups to write a definition or clue for each of the words in their puzzle. These could be done in the mother tongue. Tell them that they all need to write the clues, because they will be on their own during the next stage.

2. Go round the groups checking their work.

3. Put the students into A and B pairs. Tell them not to let their partner see their chart.

4. Students take it in turns to ask their partner for a clue for any of their blank, for example, Please, give me the clue for number 5. They write the answers in their chart.

5. Get the students to translate all the words into their mother tongue.

Comments. As with many activities, students probably learn more from writing clues than from guessing the answers.

c/ Find someone who can... - Market-place

Aims: warm up, memorizing key words, recalling definitions and descriptions, asking and answering questions, application of knowledge in practice, group-working, mingling-activity.

Preparation:

1. Make a list of notions and tasks you want the students to revise.

2. Put them in the table as in the example below (Table 4).

Table 4

List of tasks

No.	Notions and tasks	Answer	Name of student
1	Explain the main concept of sustainable development		
2	What is The Rio Earth Summit and Agenda 21?		
2	Describe the social pillar of SD		
3	Describe the environmental pillar of SD		
4	Describe the economic pillar of SD		
5	Depict types of ecosystem services		
6	Explain "sustainable production" term		
7	Explain "sustainable consumption" term		

Source: Own elaboration

3. Make copies of it for each student.

Procedure:

1. Ask students to stand up with the copy in their hand.

2. Then ask them to mingle with others and find a student who can do a task and write down their names as well as the answers in the right column.

3. When the students are ready tell them to read out the answers, one after the other, with the name of the person who provided the solution.

Comments: It is a good way to evaluate students and see who knows the answers to most questions.

d/ Find out about your colleagues' knowledge - Board-game (eg. Snakes and Ladders)

Aim: warm up, memorizing key words, recalling definitions and descriptions, answering questions, putting knowledge into practice.

Preparation:

1. Make a list of notions and tasks you want the students to revise.

2. Put them in the table (board) as in the example below.

3. Make copies of it for the students.

4. Prepare as much dices as copies and twice as much counters or ask students to bring them to the lesson.

Procedure:

1. Divide the students into pairs.

2. Hand out the copies to each pair of students and make sure that each pair has a dice and a pair of counters at their disposal.

3. Tell the students to put their counters before the first square in the table. Next tell them to throw the dice in turns and follow the instruction given in the square they land on with their counter. Allow the partners to help each other with the tasks.
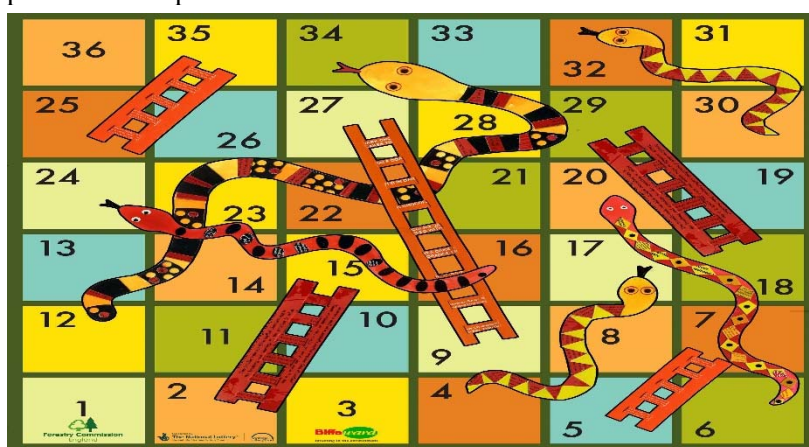
(Source: Winning a snakes…, 2015)

Comments. The activity encourages students to be active and more independent. Students can do it at their own pace.

e/ Find the odd one out

Aims: deep understanding of notions, revision of knowledge, discussion and agreement.

Preparation:

1. Write a list of several sequences of 5 words or expressions each. This list contains the notions you want your students to focus on (see example below).

2. Make a copy of this list for each student.
   a) **Regulating services, provisioning services, cultural services, supporting services, education services** *(the other terms refer to ecosystem services)*
   b) **Equity, empowerment, natural resources, participation, social mobility** *(the other terms are social ones)*
   c) **Ecological rucksack, Carbon footprint, Water footprint, Life Cycle Assessment, ecological complexity** *(the other terms are used to assess antropopression)*
   d) **Biodiversity, industrial growth, carrying capacity, unpolluted environment, ecosystem integrity** *(the other terms characterize ecosystems)*

Procedure:

1. Hand out the copies to each student.

2. Tell the students to find in each line the one expression which does not match the others.

3. Give the students some time to think it out individually.

4. Next the students discuss in pairs their choices.

Comment: The odd one has been underlined for you

f/ **Group visuals and gap-fills**

Aims: Defining and describing, working on subject-related charts, graphs and diagrams.

Preparation:

1. Make a list of metrics from the circles of sustainability for Delhi and Melbourne (Figure 4; Figure 5) you want the students to revise and research.

2. Make a worksheet as in the example below (Table 5).
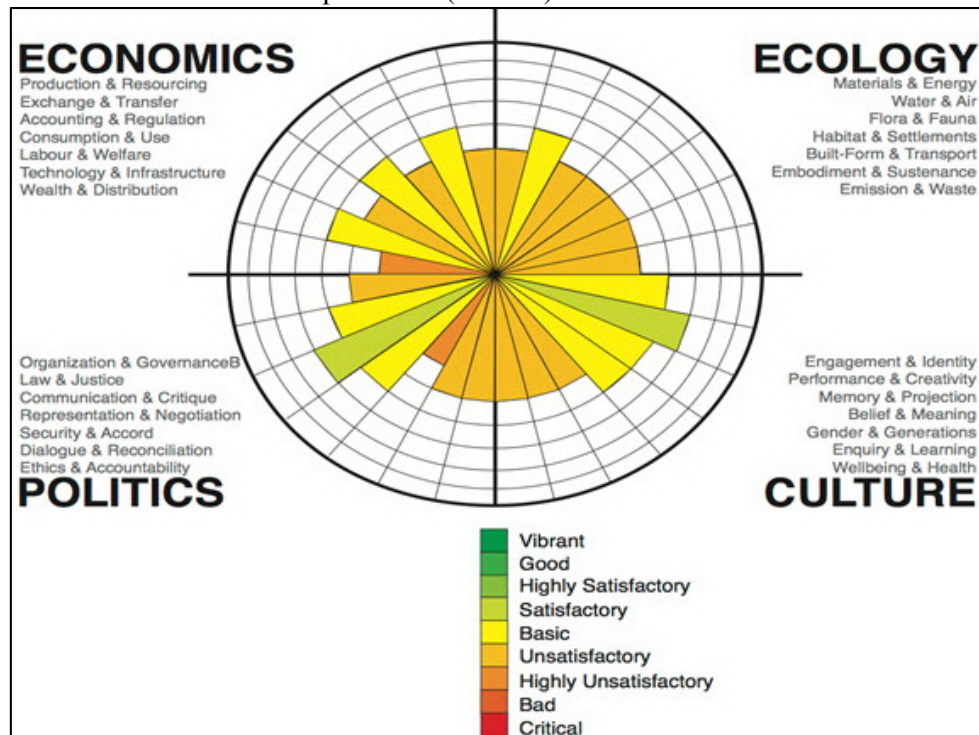
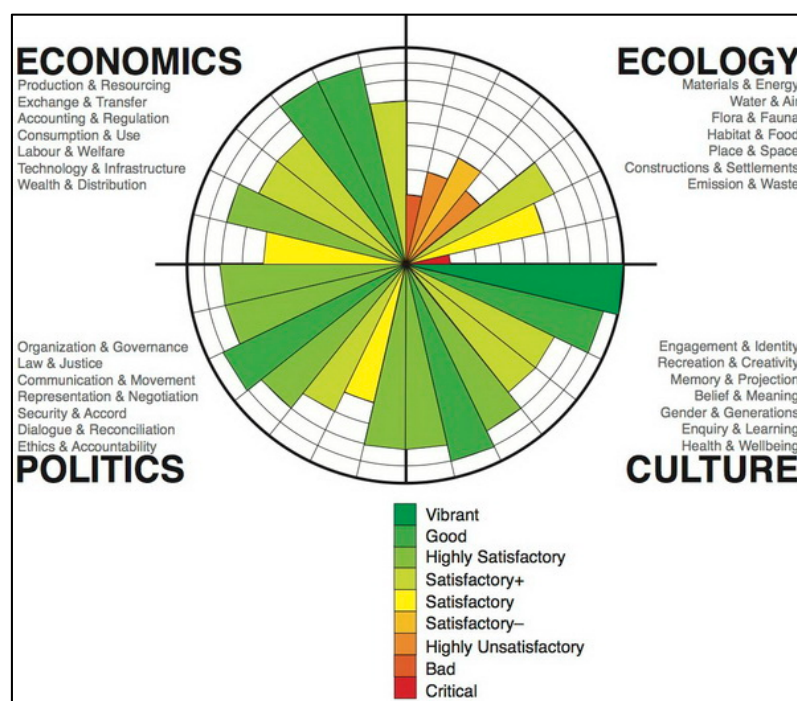Figure 4. Circles of sustainability for Delhi (Source: Profile Circles, 2015).

Figure 5. Circles of sustainability for Melbourne.

Profile circles allow to present complex data about sustainability in a simple way. Information about the region, urban settlement or city are shown as four domains: culture, politics, economics and ecology. Each of them is divided in 7 sub-domains, which are read from top to bottom in the lists near each domain name. There are nine points in the scale. As the legend shows critical sustainability is marked in red and vibrant sustainability is marked in green. The centre step which is satisfactory sustainability is coloured yellow. (coloured copy available at *http://www.circlesofsustainability.org/circles-overview/profile-circles*

Table 5

Circles of sustainability for Delhi and Melbourne Worksheet

No.	Question/ task	Answer
1	Which city is less sustainable in economics domain?	
2	Which city is less sustainable in politics domain?	
3	Which city is less sustainable in politics domain?	
4	Which city is more sustainable in ecology domain?	
5	In which sub-domains Delhi is more sustainable city?	
6	Write in which sub-domain Melbourne has vibrant sustainability	
7	Write the number of the sub-domains where Delhi has satisfactory sustainability.	
8	Discuss why ecological sustainability for Delhi looks better than for Melbourne	

Source: Own elaboration

3. Make copies for the whole class.

Procedure:

1. Display the worksheet to the class and hand out the copies to each student.

2. Ask them to work in pairs to fill in the missing Information.

3. Ask for volunteers to give the right answers.

g/ **How do you spell it?**

Aims: practising difficult spelling, the sounds of the alphabet, pronunciation.

Preparation: prepare two worksheets (see example below, Table 6) and photocopy enough for half the class to have worksheet A and the other half to have worksheet B.

Procedure:

1. Read out the words from your list and ask the students to repeat them so as to focus on the pronunciation. Also check that they remember the meanings.
2. Put the students into pairs, A and B. Give them the worksheets. Make sure they do not see each other's words.

Table 6

Words to say

Write B's words	Write A's words
1. 2. 3. 4. 5. 6. 7. 8.	1. 2. 3. 4. 5. 6. 7. 8.

Write your words	Write your words
1. 2. 3. 4. 5. 6. 7. 8.	1. 2. 3. 4. 5. 6. 7. 8.

1. overexploitation; 2. biodiversity; 3. conservation; 4. equilibrium; 5. recycling; 6. eco-efficiency; 7. deterioration; 8. retardation

Source: Own elaboration

3. Write these instructions on the board:
>   A says a word from the 'Write B s words' column
>   B writes it down in the 'Write your words' column
>   B spells the word back aloud
>   A checks it

Repeat this process with B saying a word from the 'Write as words' column.

4. Student A starts by spelling out the first word in their 'Say' column while student B writes it in the 'Write As words' column. Student B then says the word out loud. Next, student B spells the first word in their 'Say' column while A writes it in the 'Write B s words' column. Student A then says the word out loud. They continue like this until they have spelt out all their words.

5. When they have finished they check their spellings with each other.

6. Next they must fold their worksheets so that they cannot see the 'Say' column.

7. They now take it in turns to say, but not spell out, the words they wrote in their first 'Write' column while their partner writes them in their 'Write your words' column.

8. They check their spellings with their partners.

h/ **Gapped Text**

Aims: revision of knowledge, discussion and agreement.

Preparation:

1. Write a text of several sentences.

2. Delete from the text a few crucial words or expressions (write them in a box above the text in random order).

3. Make a copy of this gapped text for each student.

In 2000 the United Nations Secretary-General Kofi Annan established the Millennium Ecosystem Assessment (MA). The main goal of the MA was to evaluate the consequences of changes in ecosystem for human well-being, another objective was to assess the scientific basis for activities which are needed to extend the conservation and enhance sustainable use of those systems and their contribution to human welfare. More than 1.360 experts worldwide were involved in the work of MA. Their findings, which contained five technical volumes and six synthesis reports, ensure a state-of-the-art scientific assessment of the trends and conditions in the world's ecosystems and the services provided by them (such as food, clean water, forest products, natural resources) and the options to conserve, restore or enhance the use of ecosystems in a sustainable way (What is the Millennium Ecosystem..., 2015).

Procedure:

1. Hand out the copies to all students.

2. Tell the students to fill in the missing words in the text.

3. Give the students some time to think about it individually.

4. Next, the students discuss their choices in pairs.

i/ **Matching activity**

Aims: revision of knowledge, memorizing key words, recalling definitions and descriptions.

Preparation:

1. Write a list of several expressions together with their descriptions.
2. Put them into a table (Table 7) (expressions in one column, mixed descriptions in the other one).
3. Make a copy of this table for each student.

Table 7

Match the events to the related descriptions

	Event	Description	
A	The UNESCO World Conference on Education for Sustainable Development	International Conference in Bon in 2009 was organized on the occasion of the mid-point of the Decade of Education for Sustainable Development. Participants adopted the Declaration of Bon, which stressed that the global economic - financial crisis poses a real threat to sustainable development implementation processes. It was stressed that the situation requires a step up global efforts for effective education for sustainable development	
B	The United Nations Conference on Environment and Development – Rio Summit	In 1992 there was a conference called Second Earth Summit. The aim of the conference was to show the relationship with the deteriorating state of the environment and economic development impending global catastrophe, as well as initiate urgent action on an international, regional and national scale important for the preservation of ecological balance. The result of the conference in Rio de Janeiro were: • Rio Declaration on Environment and Development • Agenda 21 • Forest Principles • Convention on Biological Diversity • Framework Convention on Climate Change (UNFCCC) • United Nations Convention to Combat Desertification	
C	The United Nations Conference on Sustainable Development - Rio+20	In June 2012, representatives from over 100 countries met to discuss the themes of green economy in the context of sustainable development and the fight against poverty and adopted the document "Future We Want", recognizing poverty as the most important challenge facing humankind today and the most important obstacle to sustainable development. The participants stressed the right of all citizens of the planet to food and the importance of food security that can be achieved through sustainable agricultural systems and green economy.	
D	The United Nations Conference on the Human Environment	This conference was in 1972 in Stockholm and it was the foundation for the future development of the environmental law. During the Conference the environment was recognized as one of the basic functions of the state and an integral part of the state policy. Environmental protection was raised to the level of the basic functions of the state. It created a new term "environmental policy" - as an integral part of national policy. The result was a set of rules for the purposes of environmental policy in "Declaration of the UN Conference on the Environment" (Stockholm Declaration)".	
E	The World Summit on Sustainable Development in Johannesburg	It was the United Nations conference that took place in 2002. The main objective of this conference was to review the implementation of Agenda 21. It turned out that the progress towards implementation of sustainable development is much smaller than one would expect. The conference participants reaffirmed their commitment to the principles of the Rio Declaration, the implementation of Agenda 21 and the Millennium Development Goals.	
F	International Year of Biodiversity	2010, a global campaign for raising public awareness of biodiversity, drawing attention to the importance of biodiversity for human welfare, showing and promoting the achievements in the field of protection of natural resources and to encourage further efforts to combat the current trend of the falling number of species on Earth	

Source: Own elaboration

Procedure:

1. Hand out the copies to each student.

2. Tell the students to match the words in the second column to the related descriptions (put the corresponding letter in the right column next to the definition).

3. Give the students some time to think it out individually.

4. Next the students read out the solution one after the other.

j/ **Multiple choice test - Pyramid discussion**

Aims: deep understanding of notions, revision of knowledge, discussion and agreement.

Preparation:

1. Prepare a multiple choice test including the facts you want your students to focus on (see example below, Table 8). The right answer has been marked for you (*).

2. Make a copy of this list for each pair of students.

Table 8

Find the right answer

1	**Life Cycle Analysis is a technique which allows for assessing environmental impact associated with:**
A (*)	all stages of life of a product
B	distribution only
C	repair and maintenance only
D	recycling only
2	**Carbon footprint:**
A (*)	is the total set of greenhouse gases emissions caused directly and indirectly by an individual, organisation, event or product
B (*)	is one of a family of footprint indicators, which also includes land footprint and water footprint
C (*)	is measured in tonnes of CO_2 equivalent or CO_2e
D	is not useful tool to understand the impact of personal behaviour on global warming
3	**Water footprint:**
A	cannot be measured in cubic metres per tonne of production or per hectare of cropland
B (*)	its component is green water footprint- water from precipitation stored in the root zone and incorporated by plants, transpired or evaporated
C (*)	its component is grey water footprint which is amount of fresh water necessary to assimilate pollutants to meet specific quality standards of water like point-source pollution discharged to a freshwater resource directly through a pipe or indirectly through runoff or leaching from the soil
D (*)	is the amount of water which is used by a country or a household, or the amount of water used for a given activity, product or crop
4	**Which of the sustainable development indicators is not part of the social domain:**
A	Natural increase rate
B	Life expectancy of infant in health
C	Rates of detectability of delinquents in crimes
D (*)	Growth of gross domestic product per capita
5	**Which of the sustainable development indicators is part of the environmental domain:**
A (*)	Forest cover
B (*)	Greenhouse gas emissions intensity of energy consumption
C	Area under farming
D (*)	Emission of air pollutants by means of transport

Source: Own elaboration

Procedure:

1. Divide the students into pairs.

2. Hand out the copies to each pair.

3. Tell the students to tick all correct answers to each question (stress that there can be more than one correct answer).

4. Link each two pairs of students into groups of four.

5. Next, the students discuss their choices in fours.

6. Then the students discuss the answers in the whole group.

Conclusion

There are many challenges facing education in the twenty-first century. One of them is to break from the widely prevalent rat race promoting only one winner. This goal and modus operandi accepted so far by the teachers turns out to be too exhausting and socially inefficient. Nowadays it is necessary to return to the ability to harmonize the man internally, return to values as an important part of organising life. Fundamentals of ethics arise from and relate to the intelligent reading of eco-cosmology and are embedded in it. It seems that the collapse of modern philosophy is the result of following the reason solely as well as the development in the direction indicated by analytical, mathematical and therefore atomistic concepts. Treating human needs as paramount at the moment, when the basis of existence of *Homo sapiens* in its communion with nature is endangered, it would be much better if not necessary now to follow rather a holistic and organic philosophy. The emphasis on the effects of education at all levels needs to be moved to a holistic understanding of the world and responsible participation in its creation.

Teachers have to discover the motivation to maximize supporting their students in building their motivation to participate in the life of the world. For that to happen, teachers should take the time to recognize the strengths of each student, focus on what they already are and then based on that, seek effective ways to introduce changes.

In the current reality of the functioning of schools and education, the teacher - student relationship should be strengthened and re-built in collaboration with parents. All participating in the transformation of the society towards sustainability should be surrounded by optimistic mass media. It can be assumed that in such conditions of the environment and school, a new generation will enter a new, positive reality in a natural and integrated way.

When leaving school and going to university, students should be equipped with a few basic truths, like: the importance of here and now, sticking together, being friendly and supporting good ideas and actions of others.

Pragmatic motivation must give way to humanistic motivation - a doctor cannot be just a pragmatist. The same applies to a teacher.

In the opinion of the authors of the article, today's schools of different levels of education (especially those situated in often neglected rural areas) need to do some urgent work on: (1) building a belief concerning the need to protect biodiversity as the basis for the ecosystem services to humans, which ensures our survival on Earth, (2) creating motivation for learning; continuous education and training are much in need now - and it applies to both students and teachers, letting them explore and solve the current problems of economic, social and environmental context, following the SD principles, (3) changing the focus of the aims of education from accepting the "rat race", promoting an individual and his/her achievements, to promoting supporting all students in their self-improvement in cooperation with each other. This will facilitate the future participation in the responsible creation of a sustainable reality.

In order to achieve these objectives what is required is the cooperation of schools at the local level, but also at the levels of regions, countries and continents. For this to occur, the teaching of foreign languages needs to be strengthened. Effective language education can be combined with effective teaching of specific subjects and issues. Examples showing such opportunities are the concepts of Content and

Language Integrated Learning and English for Specific Purposes, which can be successfully employed in education for Sustainable Development.

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Something Old, Something New, Something Borrowed, Something Blue

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Abstract. Teaching a foreign language – what can be new in it? Most methods are as old as civilisation itself, some have appeared with the development of information technology. Teachers attend seminars and conferences, where they learn from each other, borrow some ideas which we implement and test in our specific environment. It is well-known that there is not a single perfect method, not a single perfect book which suits our needs and the needs of our students. There is a hot discussion about on-line courses, which are not a substitute for in-person classes. Moodle, which seemed to be a clue in the solution of many students' problems, is nowadays often criticised both by teachers and students. Interviews, discussions, monitoring and case study are used to find out the opinion of students and teachers. Viewing the process of teaching as a provision of guided opportunities for students, teachers should not refuse the traditional view, using a combination of both. The authors of the article are interested in finding an answer to the question how to find the most suitable methods and material for a particular students' group in foreign language teaching (FLT) for specific purposes, paying special attention to the role of the teacher. Combining old and new, sharing/borrowing the ideas and resources, using old methods in a new context and environment would help a lot.

Key words: methods of FLT for specific purposes, blended learning, Moodle, teachers' role, higher education.

Introduction

The Berlin Declaration calls upon universities to provide students, regardless of their field of specialization, with opportunities for improving their knowledge in languages (Language Studies…, 2001).

An experienced teacher knows that there is not a single perfect method of language teaching, good for everyone. Teachers of the university have a range of teaching methods as well as a variety of classes, such as Language for Specific Purposes (LSP) – sometimes also called as Professional Language, Language for Academic Purposes (LAP), Translation for Specific Purposes (TSP), or Language for General Purposes (LGP).

Even in one group students vary according to their abilities. They learn in different ways and at a different pace. The task of the teacher is to get the best out of every student so that they are able to show what they know, understand and can do. Teachers use not only "classical" methods, but modern, nowadays and comparatively new language acquisition methods like e-learning, blended learning and autonomous learning. This is a good combination of independent on-line learning with human instruction and communication. J. Gerdes (2006) sees blended learning as a "chance for both students and linguists or language teachers. Language and testing programs still have to be designed and actualized, autonomous learning processes have to be supervised and accompanying lessons have to be taught (Gerdes, 2006).

At the same time learning content-area subjects through the medium of a foreign language (CLIL) has become increasingly popular in many countries. In some cases, a foreign language is used as the medium of instruction in non-language subjects, frequently at the secondary school level when students have acquired sufficient proficiency in the foreign language (Pufahl, Rhodes, 2001).

Blended learning, which includes both traditional and non-traditional methods and means of learning a foreign language, has proved to be successful in reaching the main goals: business and life communication, work with different sources of information and its presentation, cross-cultural communication.

As the authors have written in previous publications, the use of foreign languages is a link and tool for successful study subjects' acquisition, development of different competences. Limited foreign

languages skills impose restrictions in the work of business people; prevent Latvia from getting involved into international projects and activities, in the result of which the European and world markets have partly been missed out. However, the knowledge of foreign languages is not a guarantee for a high level of communicative competence, as *communicative competence* consists not only of *communication skills* (speaking, listening, reading, writing, non-verbal and foreign languages skills), but also *the skills to accept and present information* (ICT use, presenting (oral and written) skills, performing*),* which supplement informative competence, and vice versa (Civzele, Turusheva, 2011).

Aim: to find the most suitable methods and material for a particular students' group in foreign language teaching (FLT) for specific purposes.

Methodology

Methods of the research:

1. Theoretical: analysis of scientific literature on philosophy, psychology, education and international experience;

2. Empirical: quaziexperiment, which includes: participants' pedagogical observation (monitoring); interviews, discussions, monitoring and case study discussions; reflection within the framework of portfolio method on the students' competence assessment.

At the Latvia University of Agriculture ESP or EAP is a subject in all study programmes, including bachelor' degree, master's degree and PhD programmes. All first-year students participated in the test (in 2013), which helps understand the students' level of practical use of the English language for study purposes. The level of first-year students in FL1 is not very high (Figure 1), at the same time not many study hours are devoted to the foreign language – for most programmes 6 ECTS, for some – 3 ECTS, and only for several – 12 ECTS.
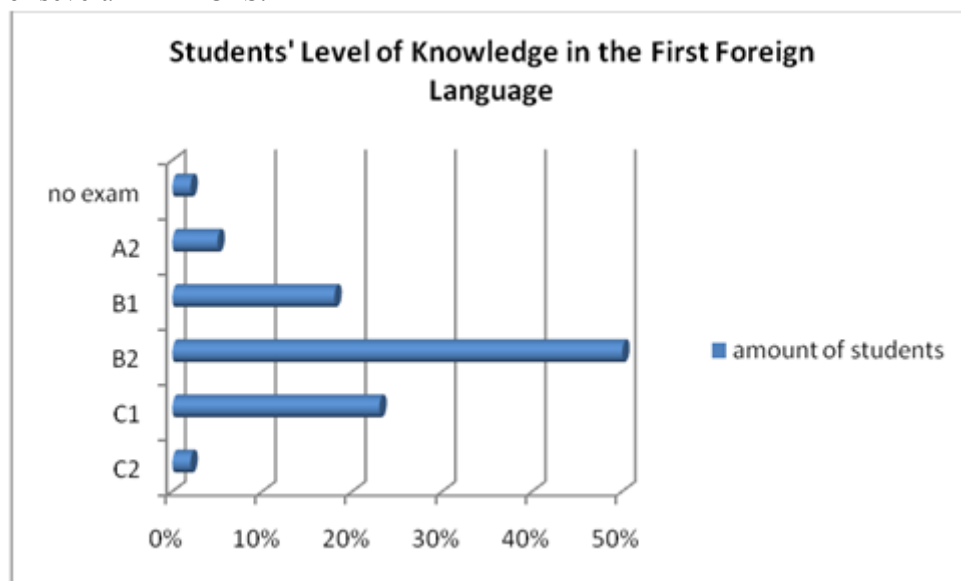
Figure 1. Students' Level of Knowledge in FL1 at the Latvia University of Agriculture.

In this situation Moodle can become a wonderful help both for teachers and students, giving them an opportunity to use different methods, to choose what is more suitable for each student, for his/her language development.

Results

As at our university we have just started to use Moodle for foreign languages teaching/learning, it was interesting to find out the students' opinion on the necessity of the use of this virtual source. 123 second-year students participated in the questionnaire (Studiju kvalitāte..., 2013); the results of their opinion are shown in Figure 2.
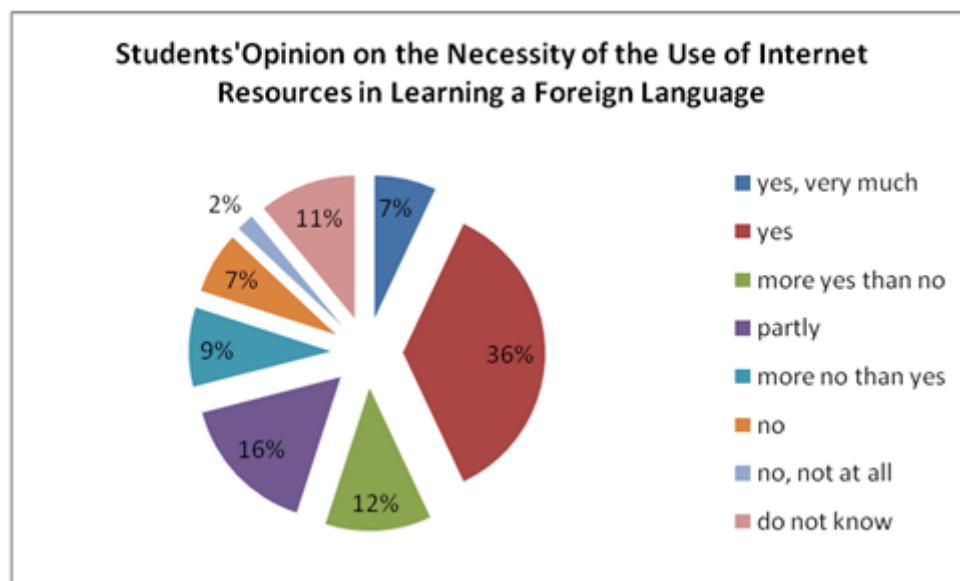
Figure 2. The Results of Sudents' Opinion on the Use of Moodle.

The students' opinion has divided into positive and negative. Those who find Moodle a useful source for language learning/development expressed such important views (though not deep understanding of Moodle) as:
- it will help differentiate language acquisition;
- it will give an opportunity to develop knowledge and skills in the language;
- it will be an additional training.

It is seen from these comments that students (and perhaps their teachers) have not understood yet all the possibilities of Moodle use. At the same time there are critical thoughts on the use of this powerful source:
- I would like more face-to-face lessons with a teacher and group work to develop speech, discussion, interview skills;
- teacher's role is very important in the teaching/learning process;
- one should learn a language in the process of speaking, not doing exercises;
- IT is harmful for health, eyes;
- I do not know what Moodle is.

From these answers it becomes clear that these students whether use Moodle in the same way as a students' book (not the best one!), or perhaps they have never tried this source by themselves.

If Moodle sources are just a substitution of books, the use of Moodle does not make any change/difference in the use of methods. Current students are representatives of Generation Y, who are technology savvy (Millennials: A Portrait…, 2007), prefer to work with superiors who are approachable, supportive, good communicators, and good motivators (Epstein, Howe, 2006). Flexibility and adaptability are required to successfully work with Generation Y (Eckleberry-Hunt, Tucciarone, 2011). Taking into account the characteristics of modern students, English teachers need to do two things: "pursue an understanding of the nature of Gen Y and adopt teaching strategies that respond to their academic needs" (Reilly, 2012, 10).

Discussions

We can learn a great deal by studying other countries' successes and using the information to implement practices that will support the development of better foreign language proficiency among our students (Pufahl, Rhodes, 2001). Quoting Judith, a beginning language teacher from courses forum (Foreign Language…, 2015), "people have so many different creative ideas you can draw from and use for your own class."

Many English language teachers highlight the importance of the Internet and specialized databases for information retrieval. Different studies have shown the use of technological tools to increase motivation and *Computer Assisted Learning (CAL)* has been encouraged and developed in every field. The use of *Computer Assisted Language Learning (CALL)* helps to support rather than substitute the conventional class activities.

Innovative technologies and media are frequently cited as a way to increase access to information and entertainment in a foreign language, provide interaction with speakers of other languages, and improve foreign language teaching in the classroom (Pufahl, Rhodes, 2001). Teachers use ICT intuitively, often waiting for immediate results. But the change with ICT is distinctive and complex mainly because ICT resource innovations are continuously and rapidly changing (Orlando, 2009). Bärenfänger's (2005) study includes portals, synchronous web-based learning, electronic performance support systems, simulations, knowledge management, self-paced CD-ROM based content, communities of practice, video broadcasts, virtual labs and chat rooms. These new tools satisfy the needs of learners, improve the quality of the learning experience, decrease the time a learner needs to achieve a learning goal, improve quality of the learning content and materials, re-usability of the learning content and materials (Bärenfänger, 2005).

The authors of this article cannot but agree with S. Bax (2003), who makes a conclusion that teachers' aim should be to attain a state of "normalisation" in which the technology is invisible and truly integrated. Dr. G. Lozanov has expressed the idea which should be remembered by all teachers: "Any given method is only as effective as its implementation" (Methodologies in Foreign..., 1999).

Why Moodle?

Moodle, or Modular Object-Oriented Dynamic Learning Environment, is designed to facilitate collaboration. It offers flexibility as well as the possibility of incorporating multimedia (Customizing Moodle…, 2011). As J. Stanford explains it, the idea is to take the advantage of Moodle e-learning environment to enrich the learning process, through a more complete exploitation of the teaching resources, contents and other aids connected with the textbook chosen (Stanford, 2009).

Teachers are often not satisfied with the fact that our students are doing at the university activities that could be easily done at home. As K. Brandl (2005) puts it, Moodle has great potential for supporting conventional classroom instruction, for example, to do additional work outside of class, to become the delivery system for blended (or hybrid) course formats, or even to be used as a standalone e-learning platform (Brandl, 2005). In M. Prensky's (2001, 1) words, "Today's students are no longer the people our educational system was designed to teach." Moodle is a great way of tying things together – grades, learners' work, individual learning plans, useful links, etc.

Ph. Bird (2010) suggests adding a link to a forum, to different information websites to give students an opportunity to get and provide real information, in a real communication online. He is sure that forums appear to be best for fluency practice, but as they leave a written record, they work very well for identifying individual students' error patterns as well. The author also proves that, as both, teacher and learner, have equal access, constructive feedback can be as simple as changing the colour of text where there is an issue, or inserting smiley faces to show missing words. The whole history of the text's development can be seen and retrieved, and can be used by learners to reflect on their writing process. Public wikis can be set up to get students to collaborate on a project, or for peer correction; learners are often keen to share content that they have created.

Teachers can then easily create a feedback exercise, asking students to reflect on their language use, grammar and vocabulary choices, pronunciation etc. If you do this regularly throughout a course it allows students to build up a portfolio, allowing them to literally see (and hear) the improvement in their language skills (Bird, 2010).

A group of language teachers (Vaca, Domínguez-Noriega, 2010) collected Moodle tools in a table to show how the Moodle tools can be used in order to achieve effective learning, which is very useful for language teachers (Table 1).

Table 1.

Moodle and Its Tools

Kind of Tools	Tools
Organizational Moodle	Themes, formats, labels, tabs, etc.
	Block Course Menu
	Tag Icons
Supporting Moodle	Spelling corrector and Dictionary
Language tutoring Moodle	Flashcards
	Games
	JClic
	Presentation, Slideshow
	Adventure
	Delivery
	Videoup
Evaluating Moodle	Webquest
	Nanogong
Collaborative language Moodle	Chats, forums, wikis, blogs, etc.
	Covcell Tools
	Wimba Module
	Skype Module
	Sloodle

Source: (Vaca, Dominguez-Noriega, 2010).

According to R.Blake and others, "many teachers still harbour deep-seated doubts as to whether or not a hybrid course, much less a completely distance-learning class, could provide L2 learners with a way to reach linguistic proficiency, especially with respect to oral language skills" (Blake, Wilson, 2008,114).

Nowadays one of the problems connected with the use of online is protection of the users and their data. Moodle gives such practical advantages as:
- users (learners and teachers) only need one login and need to get used to only one user interface;
- protection of users and their data;
- access by its users at any time and from anywhere in the world;
- strong support of learner autonomy as well as collaboration between learners.

C. Warth-Sontheimer mentions such features of support as: course editing and course administration, the integration of - authentic or didactically-enriched multimedia learning resources and a variety of communicative and collaborative learning activities (e.g. forums, chats, wikis) tutorial guidance through communicative contact (via e-mail, forum, and chat) as well as learning control (via feedback, evaluation, and tracking statistics) (Warth-Sontheimer, 2011).

Th.N. Robb states that Moodle functions "allow you to make different types of quizzes. Quiz types relevant to language teaching are: Multiple choice, True/False, Numerical, Matching, Description, and Cloze. A wide range of options allows you to randomize the questions and multiple-choice items, specify a time frame for availability, choose whether the students receive feedback or not, decide if they are allowed to view the correct answers, and determine how many times they may take the quiz and how it is to be scored (first attempt, highest attempt, average of all attempts or last attempt)" (Robb, 2004). It is also possible to just insert a link for an online test, which is available online and is offered by many teaching/learning free sources.

As observed by many teachers and researchers, Generation Y inappropriately multitasks with technology. Students are accustomed to using technology when they should be studying or are in class. The authors highlight that the students do not understand how this multitasking may be perceived as

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