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Content

Foreword.....	7
PROBLEMS AND SOLUTIONS FOR NOWADAYS SCHOOL, UNIVERSITY AND ADULT EDUCATION	
Clinical Training in Nursing Study Programmes in Latvia and Europe Ilze Briža, Anita Pipere	12
The Connectiveness between Assertiveness and Dependence on Social Networks of Future Teachers Valērijs Makarevičs, Dzintra Iliško	20
Exploring Brand Equity-Related Factors in Higher Education Antra Roskosa, Yulia Stukalina	27
Exploring Students’ Perception of Gender Diversity: Implications for Diversity Management at a University Antra Roskosa, Yulia Stukalina	35
Creative Confidence in Secondary Education: A Systematic Review Anna Sidorova	44
Dimensions of Emotional Intelligence for Supporting Childless Employees in Higher Education Institutions: A Systematic Review Vita Stige-Skuskovnika	51
Musical Activities of Primary School Students and Parents’ Engagement in Remote Music Learning during the Covid-19 Pandemic Ligita Stramkale	59
Competitiveness of Universities in the Context of Sustainable Higher Education Marina Troshkova, Irena Katane	66
The Opinion of Pre-Service Teachers on the Online Course on Textiles Damjana Vončina, Francka Lovšin Kozina	72
COMPETENCE DEVELOPMENT IN ADULT AND HIGHER EDUCATION	
Psychological and Managerial Aspects of Music Teacher’s Social-Emotional Competence Jelena Davidova	82
Evaluation and Students’ Self-assessment of Transversal Skills in Secondary School Mathematics. Case Study in Latvia Gatis Lāma	90

Situation Simulation as a Pedagogical Method in Teacher Education Dace Medne	98
--	----

Implementing Transferable Competencies in the Curriculum Through the New Course "21st Century Skills": A Case Study Jiřina Sněhotová, Lucie Smékalová, Barbora Jordánová	106
--	-----

EDUCATION FOR SUSTAINABLE DEVELOPMENT

Introducing Veganism Education Peteris Daugulis	116
---	-----

Relationship between Childhood Food Experiences and the Use of Restrictions on Consumption of Highly Processed Foods in Adulthood Marzena Jeżewska-Zychowicz, Krystyna Rejman	124
---	-----

Primary School Students' Self-Concept in Mathematics and Science: Findings from TIMSS 2019 Kristīne Kampmane, Antra Ozola	132
---	-----

Challenges of Implementing Inclusive Education: Evidence from Selected Developing Countries Rasaq Sijuola, Jelena Davidova	140
--	-----

Inclusive Education for People Living with Disabilities in Nigeria Rasaq Sijuola	148
--	-----

Challenges of Teachers' Remuneration in Latvia, Lithuania and Estonia: The View of Trade Unions as Social Partners Dita Stefenhagena, Anda Grinfelde, Inga Vanaga	154
---	-----

Secondary School as a Partner in Community-Led Local Development Katerina Tomsikova, Karel Tomsik, Karel Nemejc	162
---	-----

Student Learning Motivation in Latvian Schools Natalja Vronska	169
--	-----

DESIGN AND CRAFTS

Factors Influencing Learning Interest in Handicraft Lessons Kelli Rinne, Ene Lind	180
---	-----

Innovative Trends in Ethno-Costumology in the Modern Theater Process Meruyert Zhanguzhinova, Bagdat Akylbekova, Sabit Kurmanbekov, Nazerke Kumargaliyeva, Nazerke Kairbekkyzy	188
---	-----

DEVELOPMENT OF PROFESSIONAL EDUCATION AND CAREER

Career Counselling vs Life Coaching – Differences and Similarities Anna Bickovska	200
---	-----

The Gap between Theoretical and Practical Understanding of Gamification Sanita Leimane, Iveta Ludviga, Maija Zakrizevska - Belogradova	207
Healthy Diet and Regular Physical Activities for Support Endurance and Fitness Liana Plavina	215
Benefits of Vocational Teachers' Participation in Projects under Erasmus+ Programme: The Case of Lithuania Aušra Repečkienė, Daiva Vareikaitė, Renata Žvirelienė	221
Assessment of a Professional Competence of Healthcare Personnel Iļona Skrinda, Irēna Kokina, Dzintra Iļiško	230
Supervision as Support Opportunity in Adaptation of New Employees during Covid-19 Emergency Maija Zakrizevska-Belogradova, Renāte Linuza	238

Foreword

The Institute of Education and Home Economics of the Faculty of Engineering, Latvia University of Life Sciences and Technologies organizes the annual international scientific conference **Rural Environment. Education. Personality (REEP-2022)**. The authors of the articles are from 7 countries – Czech Republic, Kazakhstan, Latvia, Lithuania, Poland, Estonia, and Slovenia. Totally 21 educational establishments are represented in the proceedings.

Aim of the Conference: to find out solutions, exchange ideas or highlight topical problems on the 21st century education tendencies in university **and adult education**, competence, education for sustainable development, design and crafts, career development and vocational education. Thematic groups of the articles:

- problems and solutions for nowadays school, university and adult education,
- competence development in adult and higher education,
- education for sustainable development,
- design and crafts,
- development of professional education and career.

The focus of the conference is on paradigm change in higher education, strategic development of lifelong learning, an increase of online training during a pandemic, new learning strategies, students' motivation and self-reflection.

The first section **Problems and solutions for nowadays schools, university and adult education** includes researches in the fields of education, psychology, language learning and use of information technologies in education.

Articles in the first section on **Problems and solutions for nowadays schools, university and adult education** describe the topics: "Clinical Training in Nursing Study Programmes in Latvia and Europe", "The Connectiveness between Assertiveness and Dependence on Social Networks of Future Teachers", "Exploring Brand Equity-Related Factors in Higher Education", "Exploring Students' Perception of Gender Diversity: Implications for Diversity Management at a University", "Creative Confidence in Secondary Education: A Systematic Review", "Dimensions of Emotional Intelligence for Supporting Childless Employees in Higher Education Institutions: A Systematic Review", "Musical Activities of Primary School Students and Parents' Engagement in Remote Music Learning during the Covid-19 Pandemic", "Competitiveness of Universities in the Context of Sustainable Higher Education", "The Opinion of Pre-Service Teachers on the Online Course on Textiles".

Articles in the second section on **Competence Development in Adult and Higher Education** describe the topics: "Psychological and Managerial Aspects of Music Teacher's Social-Emotional Competence", "Evaluation and Students' Self-assessment of Transversal Skills in Secondary School Mathematics. Case Study in Latvia". "Situation Simulation as a Pedagogical Method in Teacher Education", "Implementing Transferable Competencies in the Curriculum Through the New Course "21st Century Skills": A Case Study".

Articles in the third section on **Education for Sustainable Development** describe the topics: "Introducing Veganism Education", "Relationship between Childhood Food Experiences and the Use of Restrictions on Consumption of Highly Processed Foods in Adulthood", "Primary School Students' Self-Concept in Mathematics and Science: Findings from TIMSS 2019", "Challenges of Implementing Inclusive Education: Evidence from Selected Developing Countries", "Inclusive Education for People Living with Disabilities in Nigeria", "Challenges of Teachers' Remuneration in Latvia, Lithuania and Estonia: The View of Trade Unions as Social Partners", "Secondary School as a Partner in Community-Led Local Development", "Student Learning Motivation in Latvian Schools".

Articles in the fourth section on **Design and Craft** describe the topics: "Factors Influencing Learning Interest in Handicraft Lessons", "Innovative Trends in Ethno-Costumology in the Modern Theater Process".

Articles in the fifth section on **Development of Professional Education and Career** describe the topics: “Career Counselling vs Life Coaching – Differences and Similarities”, “The Gap between Theoretical and Practical Understanding of Gamification”, “Healthy Diet and Regular Physical Activities for Support Endurance and Fitness”, “Benefits of Vocational Teachers’ Participation in Projects under Erasmus+ Programme: The Case of Lithuania”, “Assessment of a Professional Competence of Healthcare Personnel”, “Supervision as Support Opportunity in Adaptation of New Employees during Covid-19 Emergency”.

Authors of the articles – professors, lecturers, teachers, master and doctoral students have made a significant scientific contribution to the preparation of this international proceedings and shared their experiences on topical issues of conference topics.

Many thanks to the chiefs of all conference sections B. Briede, I. Kokle-Narbuta, I. Lice-Zikmane, Z. Beitere-Selegovska and J. Pavulens for organization and management of effective work of sections.

I would like to express my deepest gratitude to the team of conference organizers and the scientific committee for their significant contribution to improving the work and guaranteeing the quality of scientific papers and ensuring successful working sessions.

On behalf of the Conference Organizing Committee
Associate professor Natalja Vronska
Institute of Education and Home Economics
of the Faculty of Engineering,
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Problems and solutions for nowadays school, university and adult education

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Clinical Training in Nursing Study Programmes in Latvia and Europe

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Abstract: As a result of the Bologna Process, European countries have been operating common basic requirements for nursing education (NE) programmes for several years. In 2021, reforms have also taken place in Latvia to ensure the effective development of professionals within higher education, who would become autonomous medical staff with a bachelor (Bch) education. Despite the different approaches of each European Union (EU) Member State to implementation of NE programmes, the unifying element is a scope of clinical training, which under EU legislation is at least half of the total scope of study programme. According to the research, these essential requirements have had a positive impact on the development of NE across Europe. Latvian higher education institutions (HEIs) have taken over the positive experience of Europe and have aligned the scope of clinical training with the requirements of regulatory enactments. A HEI has the right to organise clinical training at its discretion, thereby creating an unequal scope of this training in certain parts of the study programme. Some HEIs implement this process as internships, while others integrate it into study courses, supplementing the theoretical knowledge and practical skills acquired in simulation rooms with the acquisition of competencies in the clinical environment (CE). However, despite the organizational differences, the unifying element of these programmes remains the total scope of studies in the CE. The NE programmes in Europe also differ in the use of the term for clinical training. Notwithstanding the designation of this peculiar study form, it is always implemented in a CE. The presented research aims to look at the essence of clinical studies and the usability of the corresponding terms in a framework of study process in a CE, as well as to analyse the differences in the scope of this study form in Bch programmes in nursing in Latvia and Europe. The document analysis method, examining 17 research papers for their compliance with international regulatory enactments, shows that clinical training, notwithstanding different terminology, is a key component of NE in a high-quality CE. The comparison of Bch's level nursing studies (NS) at Vilnius University (Lithuania), Riga Stradiņš University (Latvia), Osnabrück University of Applied Sciences (Germany), University of Barcelona (Spain), and Daugavpils University (Latvia) indicates that they generally comply with internationally recognized requirements for the acquisition of the nursing profession.

Keywords: clinical education, clinical environment, nursing education, Bachelor of Nursing.

Introduction

The World Health Organisation has defined the need for interaction between health and education sectors, stressing that their synergies will create a favourable and motivating environment for individuals to fulfil their potential in both sectors. The education sector is also considered a co-producer of public health, providing, among other things, a quality working force in medicine (WHO, 2015). The lack of quality-prepared employees in various sectors of the economy interacts with the level of education of specialists. The shortage of nurses in Latvia and the quality of their education is a long-time problem. Among the main shortcomings of the project is the poor preparedness of new employees for actual work duties. The topicality of this problem and the need for education reform in Latvia was already noticed in 1989, when during the First World Congress of Latvian Physicians, nurses, among other things, made proposals for a continuous nursing development system. In 1991, the decision to establish a professional education and qualification system for paramedical staff (Odiņa et al., 2013) came into force. Since that moment, the problem has not lost its actuality. Until 2021, it was possible to acquire the nursing speciality at two different levels of education. The acquisition of professional education was possible in the first level higher professional education programs in medical colleges, but in academic education (Bch and master programs) – in universities of Latvia.

The year 2021 in the Latvian education system was marked by a reform in NE, envisaging the substitution of two-stage education to a unified Bch education (Ministru kabineta rīkojums, Nr. 537,

2019). The conclusions of the report issued by the World Bank in 2015 “Deficiencies of the Latvian Healthcare System: Results of Interviews and Focus Group Discussions”, where human resources managers in the field of health care recommended expanding the limits of nursing competencies by abandoning restrictions on specialities (WHO, 2013), testified to its necessity in Latvia, among other things. Consequently, the solution to the above problem in education at the European level, including in Latvia, was addressed centrally within the framework of the Bologna Process, introducing this unifying element – the Bch 's level education process for the acquisition of the nursing profession. The sharing of this initiative by educational institutions in several European countries can ensure a homogeneous, transparent and effective development of nursing professionals in the higher education system. As a result of the Bologna Process, nurses become autonomous medical staff with undergraduate education (Humar et al., 2017).

The reform of NE and the implementation of European Union directives laying down the basic requirements for NE have had a major impact on the development of NE across Europe (Collins et al., 2014). Such reforms in NE, relying on the basic principles of Directive 2013/55/EC of 20 November 2013 amending Directive 2005/36/EC on the recognition of professional qualifications, should be integrated into the content and design of all European study programmes. Among other things, they stipulate that studies in authentic CEs must be an integral and essential part of the study process in nursing, ensuring that clinical training accounts for at least half of the minimum duration of the training and must be implemented in healthcare (EUR-Lex, 2013). The time spent on clinical practice in European universities ranges from 30 to 60% of the total number of hours of the programme set at 4600 hours under the Regulation (Dobrowolska et al., 2015). Given that directives in the EU Member States do not have the principle of direct applicability, but are recommendatory, this could be the reason for the observed differences in the scope of studies in a CE in the different Bch 's programs in Latvia and Europe.

The terms, designating the study process in a CE, dissent in different countries and contexts. Even though the terms *instruction* and *training* do not apply in the higher education setting, the conceptual report imposes a kind of obligation specifically for the use of such terms to describe the form of study based on the CE. EU Directive 2013/55/EC also clearly defines clinical *training* as part of the educational process in which learners, as part of a medical team and in direct contact with a healthy or sick person and/or a section of society, learn how to organise, implement, and evaluate the necessary patient care based on the knowledge and skills acquired. Learners acquire not only teamwork but also team management, organization of the patient care, as well as education on the individual and the public matters health issues (EUR-Lex, 2013). For the implementers of nursing study programmes in Europe, it is stated that effective implementation of clinical training is possible only in a medical institution; this part of the study process is adaptable to the practical form of study programme acquisition. In the absence of minimum requirements in the organisation of legal training and the corresponding use of the term for the designation of a particular part of the study, each higher education institution (HEI) chooses it at its discretion. Within the framework of the highlighted context and topicality of the problem, the research described in this article aims to examine the nature of clinical learning, the use of the relevant term concerning the organisation of the study process of a high-quality CE, as well as to inspect the differences in undergraduate nursing study programmes in Latvia and Europe.

Methodology

To reach the aim of the research, we set the following objectives:

- to examine documents (scientific literature and normative documents) in support of conclusions on the nature of this form of study and the use of relevant terms concerning the organisation of clinical training.
- to interpret the results of the analysis of Bch programmes with the degree and qualification to be obtained, as well as the total scope of the study programme, the CE, compulsory practices, and clinical learning studies, also considering the scope of study forms implemented in the CE in different universities in Latvia and Europe.

To achieve the first objective, the document analysis focused on the scientific research selected after the input of keywords: *clinical education*, *clinical environment*, *nursing professional education*,

nursing Bch. The need to find information on clinical training and CE as part of undergraduate NE determined the choice of mentioned keywords. Considering the specifics of this article, focusing on undergraduate nursing study programmes, we selected the research papers where the mentioned study programmes were reviewed from the point of view of the CE. A total of 17 studies were selected for document analysis. The analysis of published studies was supplemented by the conditions for the application of Directive 2013/55/EC of 20 November 2013 amending Directive 2005/36/EC in nursing study programmes.

To implement the second objective and to perform the analysis of Bch level NS, namely, to evaluate the scope of CE studies in Europe and its compliance with the requirements of the NE reform, the Bch programmes in Vilnius University (Lithuania), Riga Stradiņš University (Latvia), Osnabrück University of Applied Sciences (Germany), Barcelona University (Spain), and Daugavpils University (Latvia) were selected. The choice of universities in specific European countries was determined by the availability of information on the study programmes (i.e., content and scope) on the websites of universities. The four selected universities (Vilnius University, Riga Stradiņš University, University of Osnabrück, University of Barcelona) have published information on the content of the nursing study programme by semester, modules, and study courses on their official websites. In turn, the authors of this paper took part in the design of the content and structure of the Daugavpils University study programme. The collected information allowed to compare the data obtained on the peculiarities and extent of nursing study programmes in Latvia, another Baltic country (Lithuania), one Central European country (Germany) and one southern European country (Spain). The authors also highlight the differences in terms and scope of the European work-based study process in NE, as well as identify the most important elements of education, such as the student-mentor relationship model, student enrollment, requirements for teaching staff, the governance model, and the scope of clinical learning studies.

Results and discussion

Clinical environment and its forms in nursing programmes

Medical education researchers associate clinical learning with the integration of students in working environments. The educational model of clinical training or practical classes in a CE, participating in a real work team, improves not only patient care but also health care in general. Globally, this form of study has been considered as an effective and suitable means to improve the qualification of the health care team and to foster the timely arrival of students in the conditions of a potential working environment (Deatrick et al., 2015). Studies on the development, similarity, and differences in clinical training in various countries have shown that the clinical training aims to provide students with specific competencies, thus preparing an autonomous medical staff for their specific role in inpatient care (Dobrowolska et al., 2015).

The NE research shows that *clinical training* as a form of study is utilized in various contexts. Some researchers believe that this form of study is a proper foundation to prepare for an internship where, in a clinical learning environment, students learn to apply knowledge, care skills and communication with patients using their professional skills. Pedagogically adapted clinical training environment integrating professional and interdisciplinary cooperation, the structure of clinical learning, are pivotal aspects of clinical experience acquisition by nursing students (Šverina et al., 2018). Clinical training can also be a study form of clinical practice, where the student encounters realistic duties and work environment, communicate with the team and patients, thus forming a thorough view of the profession (Kuznecova et al., 2018). The educational researchers observe the use of clinical training as a form of study as a major component of the learning experience, which can affect students' confidence, sense of respect and belonging to the professional team, as well as motivation for professional self-development, organizational skills, and readiness to qualify for the speciality (Dobrowolska et al., 2015). *Clinical instruction, clinical training, clinical practice* are the most common terms used to describe the CE -based study process (Salberg et al., 2021). At the same time, the terms like *clinical practice sessions* (Xie et al., 2013), *clinical studies* (Ehrenberga et al., 2007) and *clinical education* (Thomas et al., 2018) are implemented in this discourse. Thus, it appears that there is a lack of a unified approach to the use of the terminology related to the study form, describing the educational process in the CE. However, notwithstanding the term used and the specific form of

study, it is the clinical experience that is considered an essential part of this process, as it can have a huge impact on the learning experience.

A high-quality CE in all respects is a significant part of the study process. However, researchers talk about the CE as a complex social entity in a complex and dynamic learning environment, which may not always be an efficient part of the study process for nurses. Such an environment can also be challenging, unpredictable, stressful, and constantly changing. The inadequate arrangement of the CE can also impose a financial burden on education systems, create mental, family, and educational problems for students and undermine the quality of patient care (Baraz et al., 2015). In addition, the salient dimension in this regard is also the preparation of students for the CE. Researchers of nursing Bch programmes have stated that the theoretical part of studies often has not been sufficient not only for the development of knowledge and skills but also for psychological preparation for the CE. In this environment, students could face many difficult situations like organizational problems, poor management style, difficult patients' situations, ethical problems, or unsupported decision-making in clinical practice. Such situations are one of the reasons for the theory-practice gap. Support from nurses-mentors, interprofessional cooperation and ethical competence, close cooperation between university teachers and interdisciplinary teams during clinical training can help bridge the gap between theory and practice (Kvamme et al., 2021). In the studies on the experience of medical students during clinical training, the students acknowledge that it is nurses who are professionally responsible for the care work performed by student nurses in the unit and the practical skills acquired during clinical training (Courtney-Pratt et al., 2012; Salberg et al., 2021). Also, the number of hours spent in the CE is mentioned among the most important elements contributing to the clinical experience of students. At the same time, researchers point out that Europe needs unified NE in the CE (Dobrowolska et al., 2015). Currently, those European high schools, where Bch nursing programmes comply with the requirements of Directive 2013/55/EC, have already implemented this idea. In the next chapter of the paper, we will focus on comparing the different approaches to the implementation of the CE and the scope of studies.

Clinical training in nursing programmes in Latvia and Europe: compliance with EU requirements

Bch nursing programmes, corresponding to the trends of the European Commission (2018), provide for a close link between theoretical knowledge and innovation, greater involvement of medical professionals, and response to future challenges. Work-based studies prepare competent professionals for the labour market, developing their abilities and motivating them for lifelong education. Young healthcare professionals, undergraduates, are expected to be creative, innovative, autonomous, and responsible professionals, making a significant contribution to the improvement of public health. The Bologna Process has undoubtedly helped to coordinate the development of NE in Europe, but it is up to each Member State to establish clear standards for NE (Collins et al., 2014). Among all the NE rules provided for in EU Directive 2013/55/EC, there is also the scope of clinical training. Considering the developmental trends in nurse education, the authors have analysed five European Bch nursing programmes, including Latvian, to compare the differences in the scope of clinical studies (see Table 1). For comparison, two Latvian HEIs (Daugavpils University and Riga Stradiņš University), Vilnius University in Lithuania, Osnabrück University of Applied Sciences in Germany, and The University of Barcelona in Spain, have been selected. To compare the study programmes, the authors have analysed the publicly available information of each HEI regarding the content of the study programme and study courses. The unit of measurement used to compare the scope of clinical training - credit points (CP). ECTS credits have been converted from CP according to the Latvian CP system. Comparative elements were grouped into the following areas:

- the title, type, duration of the study programme, the degree to be obtained and the corresponding qualification.
- the scope of studies in the CE provided during the acquisition of study courses.
- the scope of compulsory practice in the CE.
- the total scope of studies in the CE (including all forms of studies implemented in the CE).

The minimal scope of practice (including the form of clinical learning) in the examined study programmes is reflected in Table 1. Although the university study programmes provide for the integration of clinical training during the acquisition of study courses, their separate breakdown of the

CP is not available. To obtain these data, the authors have studied the descriptions of the study courses and the planned number of hours. The obtained results have been converted into CP. Thus, there may be a slight deviation in the reflection of the results from the actual scope of CP intended for studies of specific content in the CE of a particular study programme. The resulting CPs are marked as an approximate or close number (~).

Table 1

Analysis of the bachelor's study programmes "Nursing"

	Daugavpils University (Latvia)	Riga Stradiņš University (Latvia)	Vilnius University (Lithuania)	Osnabrück University of Applied Sciences (Germany)	University of Barcelona (Spain)
Type of study	Full time studies	Full time studies	Full time studies	Full time studies	Full time studies
Duration of studies	4 years (8 semesters)	4 years (8 semesters)	4 years (8 semesters)	4 years (8 semesters)	4 years (8 semesters)
Study programs name	Professional Bachelor's study program "Nursing"	Professional Bachelor's study program "Nursing"	Bachelor's study program "Nursing"	Bachelor's study program "Nursing"	Bachelor's study program "Nursing"
Academic degree to be obtained	Professional Bachelor's Degree in Health Care	Professional Bachelor's Degree in Health Care	Bachelor's degree in Health Science	Bachelor's degree in Health Science	Bachelor's degree in Health Science
Qualification to be obtained	General care nurse	General care nurse	General practice nurse	Health care nurse	Nurse
Volume of study programme (CP/ECTS)	160 (240)	160 (240)	160 (240)	160 (240)	160 (240)
Mandatory practice in the CE (CP)	20	54	36	20	56
Clinical training (CP)	60	~37	~76	~53	>40
Total scope of studies in the CE (CP)	80	~91	~112	~73	>96
Study forms implemented in the CE	Clinical training Clinical practice	Practice Classes in the clinical base	Professional practice Practical skills in the CE	Workplace learning Activities at the place of practice	Special practices Clinical practices

Comparing two Bch study programmes of Latvia and three European programmes, it is evident that all educational institutions offer full-time 4-year or 8-semester studies for the acquisition of the nursing profession in the scope of 160 CP (240 ECTS). The nursing study programmes of Latvian HEIs institutions are designed as professional Bch study programmes, while the other three programmes in different European countries are Bch study programmes. Similar differences can be observed in the acquisition of a degree. In Latvia, graduates of these study programmes obtain a professional Bch's degree in the health care, while in other parts of Europe – a Bch's degree in health sciences. In the case of graduation, Latvia envisages the qualification of a general care nurse, Lithuania – a general practice nurse, Germany – a health care nurse, but Spain offers the qualification of the nurse.

Comparing the scope of clinical training in Bch nursing study programmes in five countries, an equivalent organisation of study content is observed, where the development of practical skills in a form of clinical learning in a CE is intertwined with theoretical subjects at a HEI and simulations. Study courses in these programmes are focused on the knowledge and competencies necessary for the nurse responsible for general care. This confirms the findings of European researchers that clinical training is expected to result in students acquiring certain components that are formally aligned with knowledge and skills (Dobrowolska et al., 2015).

The forms of clinical learning implemented in health care institutions differ from university to university. Daugavpils University provides for *clinical training* and *clinical practice*, while in Riga Stradiņš University these forms of study are called *practice* and *classes in the clinical base*. Despite the use of different terms, the essence of clinical learning stays the same – the study process in the CE, which in all respects is an important parameter in the study process (Baraz et al., 2015). Vilnius University implements *professional clinical practice* and *practical skills development classes in the CE*, while at the University of Osnabrück, study forms describe clinical training in *the workplace learning, activities at the place of practice* and *learning practice*. The University of Barcelona, on the other hand, uses *special practices* and *clinical practices* to describe studies taking place in CEs. A common approach in all five universities is limited to the definition of internship, which by its very nature is a mandatory part of the study programmes. Describing this part of studies, universities mainly use the concepts of *practice* and *clinical practice*. Meanwhile, in European studies these terms are also used when talking about practical classes carried out within the framework of study courses (Salberg et al., 2021).

Although the total scope of clinical background studies under EU Directive 2013/55/EC is set at least at 4600 hours, the information on the official websites of the universities shows sharp differences in the scope of compulsory traineeships. In the Bch 's study programme in nursing at the University of Applied Sciences in Osnabrück, the internships consist of a total of 20 CPs, the same scope is provided for by the study programme at Daugavpils University. In turn, 36 CPs are allocated to internships in the Vilnius University nursing programme. A similar scope of compulsory practice in the CE can be observed in the nursing study programmes of Riga Stradiņš University (54 CP) and the University of Barcelona (56 CP). Such differences in CP can be explained by the integration of clinical training in the total scope of the study programme. For instance, in the study programme of Daugavpils University, courses of specialisation in the professional field envisages 60 CP in form of clinical learning, thus the total scope of CP planned in the CE is 80 CP or half of the total scope of studies. At the University of Barcelona, the total scope of CP as clinical practice in the hospital is 40 CP. Although the total number of hours spent by expectant nurses in health care facilities is not available, the total scope of CP (clinical training and compulsory clinical practice) at the University of Barcelona amounts to more than 96 CPs, which according to the regulation is more than half of the total scope of studies. A similar breakdown of the CP allocated for clinical training can be observed in the nursing study programme at Riga Stradiņš University. Including both clinical practice in the scope of 54 CP and study courses of integrated training in the CE in the scope of 37 CP, it sums up that the total time spent by students in the CE consists of more than one half or 91 CPs. In turn, the programme of Vilnius University provides that future nurses spend 112 CPs out of the entire study volume in the CE. This is the highest number of CPs seen among the five programmes analysed. Meanwhile, the Bch 's study programme of nursing at the University of Applied Sciences of Osnabrück provides the shortest time to clinical training – 73 CPs or almost half of the total study content. However, given that some data cannot be read exactly from publicly available information, there may be a slight deviation in the interpretation of the data. Consequently, the authors assume that the scope of studies in the CE at a German university is also half of the total duration of studies. The results of the analysis of Bch study programmes in nursing are in line with the findings of other researchers suggesting that despite clearly defined provisions of the European Union Directive on the scope, structure and minimum requirements of clinical training, higher education institutions in each Member State organise this study process differently (Collins et al., 2014).

Conclusions

Clinical training in NE is the part of the programme that takes place only in the CE. The authors of the article have achieved the first objective on the use of appropriate terms for the organization of clinical



training. NE researchers and implementers of study programmes refer to clinical learning as *clinical training, clinical practice, clinical part of education, clinical studies and clinical education, classes in the clinical base, professional clinical practice and practical skills development classes in the CE and specific practices*. It is necessary to highlight the topicality of the use of the potential workplace as a clinical learning environment. In these cases, the study process is enacted as learning and *classes at the workplace* or at the *place of practice*. The work-based study process in a framework of the NE reform provides that prospective care professionals will acquire competencies agreed with their knowledge and skills. Clinical training in a high-quality CE is a key component of NE. It is essential to prepare prospective nurses for the clinical learning period, where students may face a complex, dynamic, challenging, unpredictable, stressful and constantly changing learning environment. By harmonising vital elements of education, such as the student-mentor relationship model, the student enrolment, the requirements for teaching staff, the governance model, and the scope of clinical learning studies, appropriate CE conditions could be created under the supervision of a team of responsible professionals, thus facilitating effective interaction between theory and practice. Describing the outcomes of research related to the second objective – interpreting the results of the analysis of Bch nursing study programmes in terms of the scope of the studies in the CE, it can be concluded that they generally comply with internationally recognized requirements for the acquisition of the nursing profession. As a result of the Bologna Process, the requirements of the clearly defined European Union regulation regarding the scope and structure of clinical training are met in Latvian and European higher education institutions, providing that the time devoted to clinical training varies from 50 to 70% of the total scope of credits of the programme. Further development of NE in Europe would require the introduction of a common model for the organisation of clinical training, thus also improving the strategies of this form of study in order to promote the internationalisation nurse profession. The results of this article will serve as a background for further research on the diversity of clinical learning models in NS.

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The Connectiveness between Assertiveness and Dependence on Social Networks of Future Teachers

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Abstract: Assertiveness is the ability to act on the basis of one's self-esteem by considering the point of view of other people, so that the behaviour remains within positive boundaries. Given the fact that online communication is already firmly entrenched in our lives, the study aims to explore the relationship between individuals' self-assertive behaviour and addiction on the use of social networks. The authors have applied two tests developed by Sheinov: "*Addiction to social networks*" and "*Test of Assertive Behaviour*." Fifty university students agreed to participate in this study on a voluntarily bases. All of them were first-year students from Daugavpils University. It was revealed in the study that the relationship between assertive behaviour and dependence on social networking is complex and non-linear and depends on age, professional and cultural characteristics of the individual. Today, the need for assertive behaviour is experienced by many branches of public life.

Keywords: assertive behaviour, social networks, addiction, communication, university education.

Introduction

In the 40s and 50s, the American scientist Abraham Maslow completed the development of the theory of the hierarchy of human needs. The highest in this hierarchy is the need for self-actualization, that is, the desire to fully realize one's creative potential in life (Maslow, 1943; 1954). In this regard, there is a high interest in studying the characteristics of a personality that contribute to the achievement of life goals and allow the individual to implement his or her abilities in life. Among these features, assertiveness is central. As pointed out by Norton and Warnick, the systematic study of assertion began in the late 1940s and 1950s, when psychologists suggested that some mental diseases are caused by nonassertiveness and resistance or inability to openly express ideas and feelings (Norton & Warnick, 1976).

According to Pfafman (2020), assertiveness is a personality trait that manifests itself in a communication style. In the scientific research, one can find a slightly different understanding of assertiveness. Assertiveness is defined as a background trait associated with a person's temperament that affects several aspects of everyday life (Nicholson et al., 2021, 177). In general terms, assertiveness can be defined as an anti-manipulative trait, a middle ground between aggressiveness and passivity, as well as a strategy of defense against manipulation (Postolati, 2017).

Researchers came to the agreement that there are two categories of assertiveness. Positive self-confidence includes admitting personal flaws, giving and receiving compliments, initiating and maintaining interactions, and expressing positive feelings. Negative assertiveness includes expressing unpopular or different opinion, asking for a behaviour change, and refusing unreasonable requests (Pfafman, 2020). Assertiveness means being able to act on the basis of self-esteem, considering the perspectives of other people, so that the behaviour remains within positive boundaries. Furthermore, to express positive thoughts and feelings, assertive people can also control their actions and assume responsibility (Parray & Sanjay, 2016).

The ability to undertake a responsibility and the ability to take a control of one's speech activity are the main features of assertiveness (Gading, 2020). Assertiveness contributes to the achievement of goals, the development of communication skills, an increase in self-esteem and competence. Assertiveness helps to make smarter decisions without manipulation and respecting the rights of others (Postolati, 2017; Binuja & Nagarajaiah, 2000). At the same time, assertive behaviour is characterized not only by the verbal, but also by the non-verbal component. The body language of assertive individuals differs from the body language of passive individuals (Kumar & Fernandez, 2017, 9).

Assertiveness has special significance in a public speaking situation, when one needs to defend one's point of view calmly and reasonably (Pearson, 1980).

Unlike assertiveness, aggression refers to action the intention of which harms other people or controls them by force. Aggressive assertiveness is more closely related to all four forms of aggression (i.e., physical, verbal, hostility, anger) and domination compared with adaptive assertiveness (Thompson & Berenbaum, 2011).

Assertiveness involves one's right to say no without feeling guilty (Peneva & Mavrodiev, 2013). While assertive individuals have strong attachment, engagement, and pleasure motives, aggressive individuals have strong control of motives and they tend to use force to dominate, control, win, or damage others' self-esteem (Anderson & Martin, 1995). Politeness is a socially and contextually consistent subset of relevance, defined by the interaction between identity, context, and relationships (Jenkins & Dragojevic, 2011).

Manifestations of assertiveness depend on the social environment and cultural characteristics. Assertiveness plays a key role in the self-identification process of children. The socio-economic and educational level of parents affect the level of assertiveness of their children (Sheinov, 2014a). As Furnham wrote, assertiveness is a Western concept, since expressions that are encouraged and appreciated in the West are not welcomed or even are not allowed in other cultures. He concludes that collectivist (Asian) cultures are less assertive than individualistic (Western) ones (Furnham, 1979). Perhaps this fact explains the opposite results obtained in numerous studies.

The assertive communication style in many professions is very desired. Professions related to education, medicine, and management attract particular attention of researchers (Oana et al., 2019; Nakamura et al., 2017; Binuja & Nagarajaiah, 2000; Kumar, Fernandez, 2017). Researchers recognize that poor communication in healthcare is one of the leading causes of medical errors (Nakamura et al., 2017). Teaching assertiveness becomes particularly important in adolescence, when a person's identity is formed and when the foundations for future achievements are laid (Parmaksız et al., 2020).

Pfafman wrote that there is an extensive literature on assertiveness in education, conflict and behaviour modification. There is a growing body of research on health, sports and organizational issues. However, there are many discrepancies in research results, making it difficult to draw a meaningful conclusion about assertiveness (Pfafman, 2020). The contribution of this study is related to the understanding the phenomenon.

As noted above, the well-being of a person's life is associated with assertive behaviour. Meanwhile, issues related to communication such as social networks and smartphones have firmly entered our life. More and more communications are carried out via social networks and smartphones. The latter serve as an intermedium for searching and entering social networks. Frequent use of these means of communication leads to addiction and dependence on them. This is especially true for socially anxious people (Erwin et al., 2004).

Researchers assert that socially anxious people are the group of risk for developing problematic smartphone attachment due to their easy access to social content online (Brand et al., 2019). Moreover, it turned out that dependence on social networks is more common in collectivist countries (Southeast Asia) and in Afrika rather than in individualistic countries of Western Europe and North America (Cheng et al., 2021).

Smartphones are mainly used for communication via social media and instant messaging applications among young people, (Annoni et al., 2021). Research from the United States shows that up to 74% of respondents spend on a social media on a daily basis (Silver, 2019). Other studies have shown that social media addiction can negatively impact one's satisfaction with life (Masoed et al., 2021).

Satisfaction with life is one of the main characteristics of assertiveness. Therefore, dependence on social media and smartphone use can serve as an indicator of an unformed assertive behaviour. This dependence was proven indirectly: well-being as a sign of assertive behaviour and is negatively correlated with the failure of self-control in social networks. Self-control in social networks is associated with a more general characteristic self-control and can influence behaviour in various situations (Du et al., 2021). People who have a reduced level of assertiveness are more likely to use

social networks as a means of communication to express their opinions in a way that meets their social needs (Khairunnisa & Putri, 2019).

Sheinov has carried out an extensive study of literature about one's dependence on social networks. He wrote that researchers in different countries agree that one of the main reasons for dependence on social networks is the need for communication. He asserts that women in general are more active in social networks than men, as well as younger users are more active than older ones. Depression and loneliness are the most significant predictors of social media addiction. They have also discovered a positive correlation between addiction to social networks and anxiety, stress, neuroticism, emotional problems, low self-esteem, cyber victimization, physical health problems, mental disorders, procrastination, dependence on smartphones and the Internet, as well as infidelity in relationships (Sheinov, 2021). Research reflects that dependence on social networks is negatively correlated with one's level of income. According to Folaranmi, among young people with a high income who study in Nigerian universities, the percentage of addicts is lower than among young people with a low level of income (Folaranmi, 2013).

Noteworthy data were obtained in the Hou led experiments. The experiment revealed that social media addicts tend to have a low self-esteem. They see social networks as a tool to increase self-esteem. This often leads to the opposite results (Hou et al., 2019). The obtained conclusion confirmed the research carried out by Stavrova & Denissen. Their study has focused on the interpersonal level, people who use social networking more often show lower level of well-being. However, on a personal level, no relationship has been found between the use of social media sites and one's well-being (Stavrova & Denissen, 2020). Self-esteem is the basis of well-being and can affect one's well-being.

Adolescence is sensitive to the development of social media addiction. Teens who are quiet and shy tend to be nervous when meeting other people and tend to be more active on social media compared to how they interact directly (Yao & Zhong, 2014). At the same time, adolescents with a low level of assertiveness are more susceptible to the use of social networks, they use social networks more as a means of expressing their emotions more often (Khairunnisa & Putri, 2019). However, the relationship between assertiveness and social media addiction is not straightforward. Adults with a problematic social media usage may exhibit sufficient cognitive flexibility and control inherent in servant people (Aydin et al., 2020).

The study aims to explore the relationship between individuals' self-assertive behaviour and addiction on the use of social networks.

Methodology

The task of the study was to find out whether there is a link between social media addiction and assertive behaviour.

Participants: Fifty university students agreed to participate in this study on a voluntarily bases. All of them were first-year students from the Daugavpils University's program: "The teacher of preschool education", "The teacher of basic education" and "The teacher of sports". The specifics of the profession influenced the composition of the sample: of the 50 respondents, only three were men. Participation in the study was voluntary.

Materials and Measures: Two tests were used to test a hypothesis. The first test, "*Addiction to social networks*" (Sheinov & Devicin, 2021), contained 15 descriptions of situations associated with the use of social networks. The answer options for each situation were in a continuum from 5 points (I always use them) to 1 point (I use them very rarely). Thus, the minimal score (15 points) testified to complete independence on social networks, and the maximum (75 points) testified a complete dependence on social networks.

The second, "*Test of Assertive Behaviour*" (Sheinov, 2014b), contains 27 questions that dealt with passive, aggressive and assertive behaviour. There were 4 possible answers: from "I always do this" (1 point) to "I never do this" (4 points). Here, the range of the total points were also determined, which indicates to a passive, assertive or aggressive behaviour in communication situations with other people. Both tests were translated from Russian into Latvian. After that, the translation company performed a reverse translation of the test into Russian, which testified that both language options are

adequate in meaning. The Pearson's correlation coefficient ϕ allows one to determine the closeness of the relationship between two variables. This predetermined the choice of the coefficient to calculate the closeness of the relationship between the two variables. The SPSS computer program was used for the calculation of the coefficient ϕ .

Procedure: Considering that the study was conducted in the context of a lockdown and is related to the pandemic, a questionnaire was sent to the respondents by e-mail. E-mail was also used for feedback.

Results and Discussion

The authors analyse the results of the study by calculating the Pearson's correlation coefficient between the indicators of two tests. It turned out to be close to zero. At the first glance, the authors' assumption about the relationship between addiction to social networks and assertiveness turned out to be incorrect. The authors drew attention to the uneven distribution of respondents with different levels of dependence on social networks in the sample under study. In the subgroup under 30, there were both independent respondents and dependent, and significantly dependent (2 cases). In the age group after 30 contains only independent respondents. At the same time, both in the first and in the second age groups there were both passive and assertive and aggressive (according to the results of the second test) individuals.

Table 1

Distribution of the number of respondents by test results

Groups	Dependency on Social Networks			Communicative behaviour		
	No dependency	Dependent	Very dependent	Passivity	Assertively	Aggression
Until 30	21	9	2	9	15	8
30+	18	0	0	0	9	9

Table 1 shows that differences between age groups are manifested not only in the absence of respondent's dependent on social networks in the older group, but also in a large (in percentage terms) individuals are inclined to show aggression in communication situations. There were no "passive" respondents in the second age group at all. Mann's U-test and the Whitney test showed (with a confidence level of 0.05) that there are two different samples. The difference between the samples is also manifested when calculating the average indicators for each test.

Table 2

The average value of the test results for each age group

Groups	Dependent on Social networks	Assertive
Until 30	36.19	64.69
30+	25.89	71.17

Table 2 shows how the selected age groups differ. The respondents under the age of 30 use social networking opportunities more often than respondents of the second age group. The average value of the indicators according to the results of the first test approaches the border of dependencies. The average value according to the results of the second test is within the boundaries of assertiveness. The respondents from the second age group are not dependent on social networks. However, the average scores in the assertiveness test indicate that they are more likely to use aggressive communication in communication situations.

The previous analysis showed that for the further research this is necessary to take data from the first age group. In the second one, the variables are not a variable in the true meaning of the word.

Further analysis was carried out in the following sub-sample groups with up to 30 years old: passive who demonstrate dependence on social networks; assertive - dependence on social networks; and aggressive who demonstrate addiction to social networks. To determine the relationship between the two variables, the ϕ coefficient was used. The coefficient ϕ allows one to determine the closeness

of relationship between two variables in tables. The values for each pair of variables are shown in Table 3.

Table 3

Coefficients ϕ calculated for dichotomous relations of the variables of the continuum dependence on social networks - features of communicative relations (assertiveness)

The dichotomy of variables	The values of the coefficient ϕ
Passivity - addiction	0.438
Assertiveness - addiction	0.252
Aggressiveness - addiction	0.471

Table 3 shows that the relationship between assertiveness and dependence on social networks is non-linear. Statistically significant correlation coefficients were obtained only for groups of passive and aggressive respondents. To confirm the conclusions, further studies are need to be done with a large number of respondents - representatives of various professions and age categories.

Conclusions

It follows from theoretical research that dependence on social networks, using them too often and too much, develops more for socially restless people. People with lower education and lower incomes are potentially more likely to become addicted to social networks, as they are more likely to use social networks as a means of expressing emotions due to lower self-esteem. The more confident a person is, the less likely they are to get caught up in social networks.

The conclusions of this study cannot be generalized. A small number of respondents, who participated in this study, were from the same social and professional stratum and were mainly women. The research indicates that the following factors are necessary to consider: the age of the respondents, their professional affiliation, and gender. Respondents in the younger group use social networking opportunities more often than respondents in the older age group. The study shows that respondents in the age group over 30 are not dependent on social networks, but the average results of the self-confidence test indicate that they are more likely to use aggressive communication in communication situations.

This study reveals the connection between the assertive behaviour and its relations with the use of social networks and addiction to them. The relationships between assertiveness and dependence on social networks are complex and non-linear. The nonlinearity of the connection is manifested in the fact that the so-called passive, assertive and aggressive respondents have their own characteristics in the manifestation of this connection. Self-confident people are able to act responsibly and respect other people, and they are able to justify their views calmly and argumentatively. A passive person limits himself in his activities, he likes to sit aside and watch someone else's life. Aggressive people tend to control others, damaging their self-esteem, and tend to use force to dominate.

The demand for assertive behaviour in the communicative professions is relevant for medicine, pedagogy, politics and public services.


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Exploring Brand Equity-Related Factors in Higher Education

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Abstract: Due to deepened marketing orientation of modern universities the role of branding in the field is constantly growing. In the higher education settings, developing a consistent, attractive and meaningful brand is crucial for maintaining a competitive advantage in the international marketplace in the agenda of commoditization of educational services. Brand equity in higher education – as brand value determined by students’ experiences and perceptions – is related to the university’s superiority in quality and reliability (i.e. first-class academic reputation). The aim of the paper was to assess different brand equity-related factors within the Customer-Based Brand Equity (CBBE) model as perceived by students. The research methods included analysis of theoretical sources and research papers, as well as a survey administered at Riga Technical University and Transport and Telecommunication Institute (University of Applied Sciences). A questionnaire based on the multi-dimensional Customer-Based Brand Equity model was developed. Structural equation modelling was used for performing confirmatory factor analysis of relationships between different brand equity-related factors. The results of the study indicate that the Performance factor has the highest loading for students, being of primary importance for the development of brand equity by creating positive brand associations and increasing the perceived value. The results of the research would contribute to better understanding of brand equity in higher education settings, which is important for improving the competitive position of a university brand.

Keywords: university, Customer-Based Brand Equity model, confirmatory factor analysis.

Introduction

The necessity for contemporary universities to address the market of educational services in terms of marketing can be explained by the emergence of high-performing higher education institutions and enlargement of the private education sector, which results in intensified competition in this field (Diaconu, Amalia, 2011). This also leads to competition-driven and consequently, marketized higher education (Elken, 2019).

In the agenda of strengthened competition in international tertiary education, the role of an efficient marketing strategy intended for building a strong university brand increases significantly (Roskosa, Stukalina, 2020; 2021). Strategic brand positioning has become obligatory for creating inspiring consumers’ brand attitudes (Stukalina, 2019). The requirements of higher education stakeholders are constantly changing, so universities have to be more preoccupied with these expectations, resulting in enhanced marketing orientation (Hall, Witek, 2015).

In the higher education sector, developing a consistent, attractive and meaningful brand is crucial for gaining a competitive advantage in the uncertain global environment. The intensified competition in the international market of educational services forces university management to put more emphasis on branding as a promise of quality and reputation (Chapleo, 2015; Hemsley-Brown et al., 2016; Chapleo, Clark, 2016; Chapleo, O’Sullivan, 2017; Hemsley-Brown et al., 2016; Clark et al., 2020). The requirements of higher education stakeholders are constantly changing, so universities have to be more preoccupied with these expectations, resulting in enhanced marketing orientation (Hall, Witek, 2015; Stukalina, Zervina, 2019). This is closely associated with the university’s capability to maximize unique value proposition.

Nowadays, brand equity is a burning topic in the management field (Aaker, 1991). Brand equity in higher education – as brand value determined by students’ experiences and perceptions – is closely associated with the university’s superiority in quality and reliability. One of the most popular brand-equity models is the Customer-Based Brand Equity (CBBE) model, the measuring instruments of which deal with consumers assessing a brand (Keller, 2001; 2008; 2009).

The model postulates that brand involves various brand building blocks – brand equity-related factors – categorized in four levels.

Thus, for exploring consumers' perceptions of a particular brand a holistic approach should be used (Roskosa, Stukalina, 2020), CBBE model being a suitable tool for evaluating a brand's status from multiple perspectives.

The study aims at assessing different brand equity-related factors within the Customer-Based Brand Equity (CBBE) model as perceived by university students.

Methodology

The following research questions were formulated: 1) What does the concept "brand equity" presuppose in higher education settings? 2) What elements does the Customer-Based Brand Equity (CBBE) model include? 3) How are different brand equity-related factors within the CBBE model perceived by university students?

The research methods include analysis of theoretical sources and research papers on the topic under discussion, as well as a survey administered at Riga Technical University and Transport and Telecommunication Institute (University of Applied Sciences).

The authors used a questionnaire built around the multidimensional-CBBE model. It was developed by Roskosa and Stukalina (2020) and then refined by Stukalina and Pavlyuk (2021). The questionnaire was circulated among the 2nd-year foreign and local students of Transport and Telecommunication Institute and Riga Technical University, representing the following study directions: IT, Business and Management, Transport and Logistics, Engineering. The total number of distributed questionnaires was 280, from which 251 were returned.

The questionnaire included twenty items grouped into five sections associated with the brand-building blocks aspects included in the Keller's CBBE model: Performance, Judgements, Imagery, Feelings and Resonance (Roskosa and Stukalina, 2020; Stukalina and Pavlyuk, 2021):

- *Performance*

q1. This brand is unique with regard to educational services and programmes in contrast to other universities in Latvia.

q2. This brand provides benefits that other brands cannot offer.

q3. This brand is capable with regard to responsiveness to the students' requirements and expectations.

- *Judgements*

q4. The brand provider is knowledgeable and helpful.

q5. The brand provider is creative (innovative).

q6. The brand provider takes into account my views and attitudes.

- *Imagery*

q7. The design features of this brand are good-looking and impressive.

q8. The people whom I respect recognize and are fond of the brand.

q9. Thinking of the brand can encourage positive emotions.

q10. Other students' opinion of the brand is rather positive than negative.

- *Feelings*

q11. The brand will give my life a meaning and value.

q12. The brand respects students' personal identity.

q13. The brand respects students' professional identity.

q14. The brand provides students with a sense of social approval.

q15. The brand provides students with a sense of self-respect.

- *Resonance*

q16. I feel a deep connection with other students using the brand.

q17. I do admire talking about the brand to others.

q18. I would actually miss the brand if I had to quit.

q19. I always try to stay informed about the brand.

q20. I would certainly endorse this brand to others.

For processing the obtained data structural equation modelling (Casanoves-Boix et al., 2016) was then used for performing confirmatory factor analysis of relationships amongst brand equity-related factors. The brand model's "goodness-of-fit" was assessed employing four approaches: chi-squared statistic, RMSEA (root mean square error of approximation), TLI (Tucker-Lewis index), CFI (comparative fit index): RMSEA < 0.08, TLI > 0.9, CFI > 0.9.

Results and Discussion

Literature review

Today, European universities are made to transform to organizations acting as businesses in an extremely competitive higher education market (Mampaey, Huisman, 2016; Mampaey, 2018; Mampaey et al., 2020). Therefore, the market-oriented approach in tertiary education is widely accepted; the analysis of up-to-date trends in the global higher education market has become an essential part of the university's marketing strategy development (Stensaker, 2007; Hemsley-Brown et al., 2016; Mihajlovic et al., 2016; Białoń, 2015; Stukalina, 2019).

Recently, branding has been employed as a "differentiation strategy" for tertiary institutions (Pinar et al., 2020). Building a healthy brand has become a priority of any organization (Keller, 2001); for a modern higher education institution, it is vital to develop a robust brand confirming its trustworthiness in the transnational education market (Kotler, Keller, 2016). In general, a university's brand represents the total of feelings and perceptions that all higher education stakeholders associate with this university (Ali-Choudhury et al., 2009), the focus being put on students as primary consumers of educational services (Roskosa and Stukalina, 2020).

Currently, the concept of brand equity in the tertiary education area has gained increased significant consideration from researchers. The existing research on brand equity shows that a brand can be conceptualized by using some dimensions; brand equity can be considered as a multi-dimensional concept (De Chernatony, McDonald, 1998). Consequently, there are various definitions of brand equity. Aaker (1991) terms brand equity as a number of assets including "name awareness, loyal customers, perceived quality and associations" related to the brand and adding value to the service/product. Keller (1993) terms brand equity as the influence of the brand on the consumer's response to the marketing activities linked to a particular service/product. Some definitions describe brand equity from a financial perspective – assets being of value to the organization due to its capacity to generate future revenues (De Chernatony and McDonald, 1998; Kim et al., 2003).

In view of the above, brand building blocks can be manifested in diverse models and patterns (Kotler, Keller, 2012). The model used in this paper is the one created by Keller (2001; 2003; 2009; 2013) – the Customer-Based Brand Equity (CBBE) model. The brand "meaning" dimension is exemplified by brand imagery and performance; the "responses" dimension is embodied by consumer feelings and judgements; the "relationships" dimension is associated with consumer brand resonance. In this model, the branding aspects hierarchy is reflected; all aspects are inter-related, brand resonance representing the highest level – "harmonious" relationships established between the brand and consumers (Kuhn et al., 2008). The CBBE model includes both emotional and rational elements (Keller, 2001); so it is wide-ranging and is supposed to be applicable to various contexts and settings. The hierarchy of brand equity-related factors within the CBBE model is demonstrated in Figure 1.

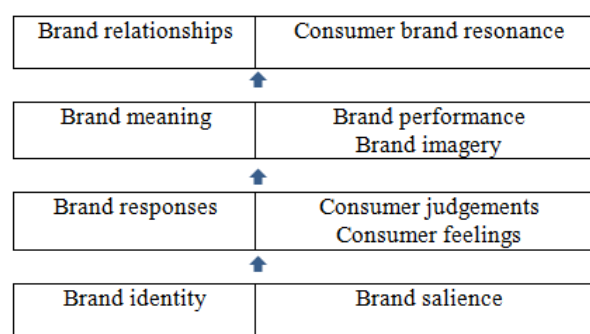


Figure 1. The hierarchy of brand equity-related factors within the CBBE model (Keller, 2001).

The research performed by Roskosa and Stukalina (2020), and Stukalina and Pavlyuk (2021) proved that the CBBE model – as key conceptual tool – could be successfully applied in the frame of a holistic approach to understanding a university’s brand for developing and improving a marketing strategy aimed at accomplishing a competitive advantage. With the CBBE model, this study attempts to assess and prioritize different brand equity-related factors as perceived by university students, focusing on brand responses, meaning and relationships.

Empirical research results

For performing confirmatory factor analysis of relationships among brand equity-related factors, structural equation modelling (Casanoves-Boix et al., 2016) was applied. Summary of the model’s fit indices is given in Table 1.

Table 1

Models’ fit summary (source: based on the acquired data)

Colour	Complete sample
Chi-Square statistic (p-value)	239.899
RMSEA	(0.0001)
CFI	0.043
TLI	0.949

The chi-squared test shows statistical validity of the factor structure (the null hypothesis about absence of factor loadings is rejected). RMSEA, TLI, and CLI values show borderline performance of the structural model for the samples: RMSEA values are smaller than the good threshold (0.05). CFI and TLI values approximate the acceptable 0.9 threshold, and are close to 0.95. Summarising the model fit statistics, it may be concluded that the model adequately satisfies the fit requirements, and may be utilized for subsequent examination of factor loadings.

Figure 2 signifies the structural equation model components with standardised factor loading for the pooled sample.

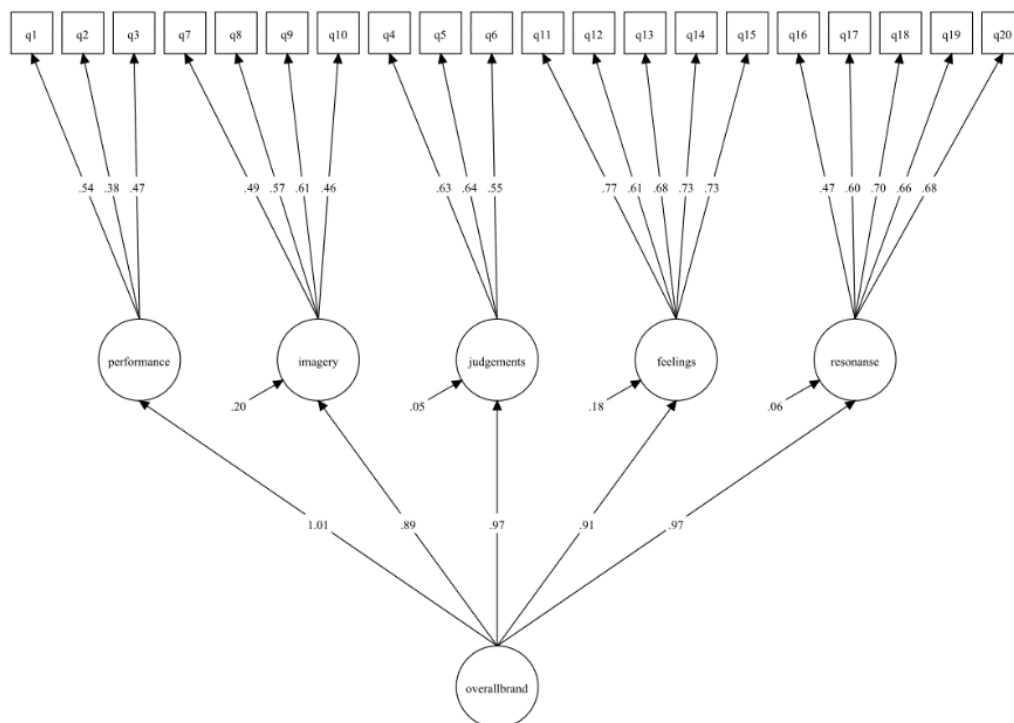


Figure 2. Resulting structural equation model (source: authors’ construction based on the acquired data)

The structure of factors is study design-based, and performance of the model fit confirms the structure. The five brand equity-related factors of the secondary dimension considerably load to the brand equity: the lowest standardised loading (0.89) is recognized for the Imagery factor, whereas loadings of other factors surpass 0.9. First-level factors loadings are noteworthy for the input variables (i.e. questions) too and in the main, evenly distributed.

Standardised factor loadings for the pooled sample are also shown in Table 2.

Table 2

Model's factor loadings (source: based on the acquired data)

Item	Standardised factor loadings (standard errors are given in brackets)
Performance	
q1	0.543 (0.084)
q2	0.376 (0.081)
q3	0.470 (0.081)
Judgements	
q4	0.631 (0.068)
q5	0.643 (0.063)
q6	0.554 (0.062)
Imagery	
q7	0.493 (0.077)
q8	0.573 (0.066)
q9	0.606 (0.068)
q10	0.464 (0.077)
Feelings	
q11	0.768 (0.048)
q12	0.611 (0.062)
q13	0.679 (0.061)
q14	0.732 (0.048)
q15	0.731 (0.054)
Resonance	
q16	0.473 (0.065)
q17	0.603 (0.057)
q18	0.703 (0.053)
q19	0.659 (0.053)
q20	0.681 (0.049)
Brand equity (total)	
Performance	1.011 (0.101)
Imagery	0.891 (0.061)
Judgements	0.974 (0.059)
Feelings	0.907 (0.038)
Resonance	0.968 (0.036)

Discussion

The research performed in the paper has provided answers to the research questions, allowing the authors to identify main elements of the Customer-Based Brand Equity (CBBE) model in educational settings, as well as those brand equity-related factors, which have a highest priority for university students.

Key findings based on the research results can be summarized as follows:

- The Performance factor has the highest loading for students.
- For the Performance factor, q3 – *This brand is capable with regard to responsiveness to the students' requirements and expectations* – has the highest loading for students.
- In descending order (in order of priority for students), the following factors are arranged: the Judgements factor, Resonance factor, Feelings factor, with the Imagery factor having the lowest loading for students in the resulting model.
- For the Judgements factor, q5 – *The providers of this brand are creative (innovative)* – has the highest loading for students.
- For the Resonance factor, q18 – *I would actually miss this brand if I had to quit* – has highest loading for local students.
- For the Feelings factor, q11 – *This brand will give my life a meaning and value* – has highest for students.
- For the Imagery factor, q9 – *Thinking of the brand can encourage positive emotions* – has highest loading for students.

Conclusions

In the paper, the Customer-Based Brand Equity (CBBE) model was utilized to disclose how various brand equity-related factors were perceived by university students. The estimated structural equation model, which was created based on the collected data, proves that the university brand equity can be represented as a combination of these factors.

The following conclusions can be made on the basis of the study.

- Statistical analysis of the data obtained through the survey carried out in two higher education institutions revealed the significance of different factors included in the model (in order of priority for students): Performance, Judgments, Resonance, Feelings and Imagery.
- The results of the study indicate that the Performance factor has the highest loading for students, i.e. has the primary importance for developing brand equity by creating brand associations and increasing the perceived value.
- The survey also discovered some specific aspects associated with the above brand equity factors:
 - the highest importance of responsiveness to the students' needs and expectations for the Performance factor;
 - the highest importance of creativity and innovation for the Judgements factor;
 - the highest importance of sticking around the brand for the Resonance factor;
 - the highest importance of giving the students' life a meaning and value for Feelings factor;
 - the highest importance of encouraging positive emotions for the Imagery factor.

The results of the research would contribute to better understanding of brand equity in higher education settings, which is important for improving the competitive position of a university brand in the today's uncertain environment.


The study has the following limitations. It was conducted within two technical universities, so the results may signify a few factors, which are not descriptive of all higher education institutions. Another limitation of the research is its geographical coverage – Latvia. Besides, the study did not involve other higher education stakeholders: school graduates and their parents, alumni, etc. So, further research with a bigger research base confirming the relevancy of the CBBE model in numerous settings is recommended.

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Exploring Students' Perception of Gender Diversity: Implications for Diversity Management at a University

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Abstract: The increasing role of diversity management in educational settings is a response to numerous social challenges that modern universities encounter. The diversity management training linked with promoting social sustainability is crucial in the context of accomplishing the Sustainable Development Goals set by the United Nations Organization. The aim of the paper is to explore students' perception of gender diversity for mapping their attitudes to diversity and identify main barriers for accepting diversity. It is important for creating advanced teaching strategies, which can be successfully used to build the learning environment that is safe, inclusive and unbiased. In the context of diversity management, it would help the university (students/teaching staff/administration/other employees) avoid the conflicts caused by gender diversity/equality. The main research method includes a survey based on an original questionnaire developed on the basis of students' essays. The results of the study demonstrate that students' views on gender diversity/equality are quite sensitive and can be many-sided. This fact is of a high importance for universities to be considered for promoting the democratic processes there.

Keywords: higher education, diversity management, gender equality, inclusion

Introduction

Recently, modern society has become increasingly diverse (OECD, 2020). Educational institutions are becoming more and more diverse as well, the dimensions including special education needs, migration, ethnic groups, gender, etc.; for navigating this diversity, it is important to adopt a "multidimensional" approach and intersectional that would assist education systems support equity and inclusion in the learning process (OECD, 2021).

Thus, diversity, as a broad term, refers to "any characteristic that makes people different from one another" (Robbins, Judge, 2013). The diversity concept is associated with respect, understanding that everyone is unique, at the same time recognizing all individual differences (Patrick, Kumar, 2012). The so-called surface-level diversity is related to such demographic dimensions as gender, race, ethnicity, age, or disability, which may evoke certain stereotypes. Therefore, variations in the above characteristics can become the basis for discrimination against different groups of people (Robbins, Judge, 2013). There is an increasing awareness that gender equality is a keystone of inclusive growth; "gender-responsive" policy making is expected to guarantee that all benefits of social and economic development are shared equally (OECD, 2015). Gender diversity is a burning issue nowadays; it has initiated a lot of discusses if women can perform their jobs as well as men can do (Robbins, Judge, 2013).

Numerous studies have revealed that there are no steady male-female differences regarding problem-solving, learning and analytical abilities, social skills, motivation and competitive ambition (Weiss et al., 2003). Psychological research has also revealed that though women tend to be more agreeable (to follow the authority) and men are more aggressive, those differences are unimportant (Robbins, Judge, 2013). Besides, no noteworthy difference in job performance between men and women has been found (Black, Holden, 1998). Due to existing stereotypes, gender roles may influence people's perceptions of gender diversity. For instance, women who do well in traditionally male fields can be perceived as less required as administrators (Heilman, Okimoto, 2007). At the same time, compared to men women are likely to believe sex-based discrimination is more widespread in the workplace (Avery et al., 2008).

With view of the above, diversity management should be a constant commitment that embraces all organizational levels (Robbins, Judge, 2013). Diversity management can be defined as a process aimed at developing and maintaining a constructive work environment, in which diverse perspectives

are valued, so that all people can accomplish their potential and contribute to the goals and objectives formulated in the organization's strategy (Patrick, Kumar, 2012).

Diversity management involves an assortment of practices used to improve the climate for diversity in an organization, including gender diversity, tend to be efficient if they are created to recognize all employees' perspectives (Robbins, Judge, 2013). Since prejudices influence the treatment of demographically diverse groups of people, diversity managers must be responsive to the multifaceted joint impacts of stereotypes in the organizational context for designing operative diversity management interventions (Dietz, Petersen, 2006). These interventions are aimed at a) avoiding negative stereotypes; b) excluding discriminatory behaviours; c) reducing justification factors; d) increasing suppression factors (ibid.).

In the agenda of diversity management interventions intended for eliminating destructive stereotypes and prejudices, the incorporation of the gender perspective into educational programmes is gaining popularity worldwide; an educational organization can be regarded as a social place for the "gendered cultural reproduction", so it may facilitate accomplishment of gender equity and stimulate gender fairness and equality (Mojica, Castañeda-Peña, 2017). Thus the increasing role of diversity management in educational settings is a response to social challenges that universities encounter today. Modern educational organizations should be transformed into an inclusive and co-educational space (Heras-Sevilla et al., 2021). The diversity management training, which is closely linked with promoting social sustainability, is vital in the context of achieving the Sustainable Development Goals, namely Goal 5 – "Gender Equality" (The Sustainable Development ..., 2021).

The aim of the current study was to explore students' perception of gender diversity for mapping their attitudes to diversity and identify main barriers for accepting diversity. It is vital for creating advanced teaching strategies, which can be successfully used to build the learning environment that is safe, inclusive and unbiased. In the context of diversity management in higher education, it would also help the university (students/ teaching staff/administration/other employees) raise its competence to operate in a tolerant way and cope with the conflicts caused by the gender diversity/equality.

Methodology

There were two main research questions developed: 1) Do the views on gender diversity/ equality differ in local and foreign students' groups? What are the main differences? 2) What is the role of education/ university to help students to form their views on gender diversity/ equality?

For collecting primary data, an original questionnaire based on 95 RTU students' essays was developed. Initially, the students wrote an essay: "*Do I Believe in Gender Equality?*" The essay was written in June, 2021. The survey was conducted in September – October, 2021. One hundred forty-nine students of two universities – Riga Technical university (RTU) and Transport and Telecommunication institute (TSI) participated in the research. The population of the research included ninety-three local students (sixty-eight RTU students and twenty-five TSI students) and fifty-six foreign students of RTU. There were fifteen statements on gender diversity/equality included in the questionnaire. The statements can be split into three groups; the groups represent different diversity-related aspects: 1) Complex (multi-sided) nature of the gender diversity (five items); 2) gender equality as a democratic value (five items); 3) stereotyping and discrimination as characteristics of gender inequality (five items).

The response format was a three-point Licker scale – "agree", "neither agree nor disagree" and "disagree". The data were processed by means of Excel tools. The students were also asked to comment upon the statements included in the questionnaire. There were 32 RTU students, both foreigners and local ones, who contributed to the research.

Results and Discussion

Gender diversity management is a topical issue nowadays. However, there is a lack of researches analyzing the issues of gender diversity/ equality at university. This is an empirical research which introduces with students' view on gender diversity /equality and may help the university manage this type of diversity successfully.

The research results are summarized in Table 1.

Table 1

Summary of the empirical research results (related frequencies)

Item	Local			Foreign			Chi-test
	agree	neither agree nor disagree	disagree	agree	neither agree nor disagree	disagree	
S1	47%	29%	24%	50%	20%	30%	0.00027
S2	55%	25%	20%	73%	13%	14%	0.00006
S3	60%	29%	11%	79%	13%	9%	0.00005
S4	85%	12%	3%	98%	2%	0%	0.00006
S5	19%	37%	44%	32%	29%	39%	0.00010
S6	83%	14%	3%	82%	14%	4%	0.00063
S7	86%	8%	6%	91%	4%	5%	0.00041
S8	91%	5%	3%	96%	4%	0%	0.00032
S9	86%	10%	4%	86%	9%	5%	0.00060
S10	77%	17%	5%	95%	4%	2%	0.00004
S11	58%	26%	16%	73%	23%	4%	0.00006
S12	81%	15%	4%	91%	7%	2%	0.00020
S13	47%	47%	5%	68%	30%	2%	0.00003
S14	17%	37%	46%	30%	20%	50%	0.00003
S15	44%	32%	24%	36%	30%	34%	0.00023
Total	62%	23%	15%	72%	15%	13%	

Below, the results of the empirical research are discussed in more detail.

1. Many-sided nature of gender diversity (statements 1-5)

It is a well-known fact that the attitude and behaviour of students as well as the administration, the teaching staff and other employees at university create the atmosphere there. Thus, they can make it positive and inclusive or negative and segregating. In other words – approving or disapproving democratic values there. This paragraph analyses different statements on gender diversity trying to reveal its many-sided nature to develop democratic processes at university.

Statement 1. The first statement analysed in the research could be stated to be traditional, **“men and women are different: a woman is a woman and cannot be a man. Nature has arranged it and we should not go against the laws of the Nature”**. About a half of foreign students (50%) and local ones (47%) agree with this statement. Thus, the view of about a half of students could be characterized as traditional. One of the foreign students commented that, *“it is our culture, religion and human nature which show that the men are the men and the women are the women”* (foreign student).

However, there are quite many foreigners (30%) and local students (24%) who disagree with this statement, *“but for some people it is hard to accept it”* (local student). Moreover, it is interesting to note that 20% of foreign students neither agree nor disagree with this statement but the amount of local students is higher – 29%. Thus, the data prove that students have doubts on the traditional approach to gender diversity which have also been expressed in their comments, *“the Nature decides what gender we have, however, some people have psychological or other problems, so they just do not accept themselves in a given gender. So I think everybody can decide himself who he wants to be”* (local student) or *“Nature can make mistakes* (local student). Apart from it the students’ comments prove that the most of them express tolerance to gender diversity, *“I think everyone has their own rights to define themselves. It is not my life, it is not your life, it is theirs and only they can decide what gender do they identify with and we should not judge it”* (four local students). Students also emphasize on the importance of gender equality and tolerance, *“even though we have many differences, we are all*

humans. No matter what differences we have, we should not hate someone just because they are not as “normal” as everyone else” (two local students).

Statement 2. The next statement analyzed could be also characterized as traditional. Besides, it also shares the view of religion on gender diversity, **“I believe in justice and the wisdom of its Creator. I think He created the man and the woman with different appearances and powers that they both have been able to complement each other. And the world survives depending on the strength of both. It must be understood that the society views and expects different things from both sexes”**.

Most of foreign students (73%) agree with this statement. Local students are not so positive with it. The ones who have given a positive answer are 55%. There are also more local students (20%) who disagree with this statement or have doubts on it – 25%. The data prove that foreign students are more sure and positive about this statement – only 14% of them disagree and 13% of them neither agree nor disagree with it. Thus, the data prove that the local students tend to have a more untraditional view on gender diversity. Moreover, the local students could be characterized as critical to the religion and its doctrine. It is proved by their comments, *“the first thing – I do not believe in the Creator. We – people create ourselves and my gender cannot describe my powers – I can”* (local student). It could be explained by the atheistic propaganda in the soviet times which may have an impact on students’ upbringing and values. Students also emphasize the impact of culture and traditions on the roles of genders, *“it must be understood that the societies of each culture expect different things from different genders”* (local student). However, students also deny the impact of society on their views, *“in fact women are not intended to do things that many men do. You should not pay attention to the society because everyone has almost different worldviews and lifestyle to live”* (foreign student).

Statement 3. Another statement focused on the differences of genders and their pluses and minuses more in deep, **“when it comes to physical strength men are more powerful, but when it comes to mental strength women are incomparable”**. (Mahatma Gandhiji). **Even though we have obvious differences we still have a very important thing in common, we are all humans”**.

The data demonstrate that foreign students are more confident with their opinion. 79% of them agree with this statement, only 9% of them disagree. And only 13% have neither agreed nor disagreed with it. The confidence of local students is not so strong and their views are different. 60% of them agree with the statement, 11% disagree but rather many of them – 29% cannot give a strong opinion. Thus, the data prove that the opinion of local students has not completely formed yet. There are quite many students’ comments on physical abilities which may be stronger for males, however, emphasizing that other abilities like creative and mental ones have been shared equally, *“biologically we are built different but our creative abilities are equal”* (local student). There are also critical comments on the strengths which have been traditionally considered to be more characteristic for males or females, *“I think the quote does not really represent the reality of today. There are physically weak men and mentally weak women. I think there is more than a couple exceptions to that so it does not seem fair to say that. But I do strongly agree that everyone is a human and that is the most important part”* (local student).

Statement 4. The other statement researched could be characterized as untraditional because it stresses on the equality and importance of any gender, **“all the people of any gender should realize that they cannot live without one another. All the genders are equally important to the world. Gender diversity is a part of the world’s variety. There is no such a thing as “a better gender”. Appreciation and celebration of each other’s differences is what eventually can make us equal”**.

The data show that most of students both foreign (98%) and local (85%) agree with this statement. It is important to note that this is the statement the foreign students have agreed the most, and one of the most agreed also by local ones. Thus, the students are confident with this issue. However, when giving their comments some of students have a rather radical view, *“I would not be so sure about the saying that women cannot live without men or men cannot live without women. The only difference is that, if one day one of the genders disappear women will learn how to live without men and will learn their skills, but men will not do it. That is why we need to appreciate each other and hope that such situation will never happen”* (two local students).

Statement 5. Apart from other statements the research also analyzed the role of a woman focusing on realization of her potential, ***“women have yet to be able to contribute successfully and, in fact, are unaware of their full potential. Women are more likely than males to stay inside their comfort zones”***.

The data prove that there are differences in the opinion of foreign and local students. There are more foreign students (32%) who agree with this statement. The amount of local students is considerably smaller – only 19% have answered positively. The difference in students’ opinions disagreeing with the statement is not so considerable – 39 % of foreigners and 44% of local ones. However, there are quite many local students (37%) not having a strong opinion on the statement. The group of foreigners who neither agree nor disagree with the statement is smaller – 29%. Therefore, it could be concluded that students react to this statement in a rather sensitive way. The root of the matter could be hidden in the status of women in the society/ labour market/ education system. It seems that women can still not find satisfaction with their place.

There are also many students’ comments proving that this issue is sensitive, but also quite subjective, ***“most of the women really are unaware of their full potential because they are afraid that they will be put down for what they are doing. That is why they are staying inside their comfort zones. But women should be less scared of it and try to do something because maybe it will have a huge impact on their and others’ lives”*** (two local students). Students also give the reasons why women are still facing these problems, ***“I think women historically have had much less opportunities to contribute successfully but even so, many have. When women are in bad, unequal environments, they cannot succeed, not because they have a lack of motivation, ideas or potential”*** (two local students). The data ascertain that there is a large place for improvement to solve the problems of inequality, ***“we, women, are the ones who are most likely pushed out of our comfort zones because men often restrict women”*** (local student) or ***“because women do not always have rights to do what they really want”*** (two local students). Therefore, it is important to see the gender equality as a democratic value. This aspect has been analysed in the following paragraph.

2. Gender equality as a democratic value (statements 6-10)

Statement 6. This research also analyzed those gender diversity aspects which emphasise on democratic values in the society, at workplace and at university. The first of them deals with the distribution of power, influence and decision-making equally, ***“I believe it is important that men and women can share equally in the distribution of power, influence and decision-making”***.

The data prove that most of students belonging to both groups share the same opinion – 83% of locals and 82% of foreigners agree on the statement. It could be explained by the fact that students have high expectations to distribute power, influence and decision-making as human rights of everybody placing males and females equal in their opportunities. This approach could make a success for both parts involved. Students’ comments prove it, ***“we can achieve more together”*** (local student).

Statement 7. The next statement stresses the financial independence of male and female, ***“men and women should have equal opportunities for financial independence through work”***. The data prove that most of students agree with the statement – foreign students (91%) and local ones (86%). This is one of the statements that is most agreed by students. It means they consider the financial independence to be very important. Students’ comments also prove it, ***“it is discriminatory to arbitrarily restrict opportunities of someone to work and achieve financial independence, solely because of their gender”*** (two local students).

Statement 8. Another statement dealt with education and personal development, ***“men and women have to enjoy equal access to education and the opportunity to develop personal ambitions, talents, ability and skills”***. This is the statement both groups of students have agreed most – foreigners (96%) and local students (91%). This means that students take the education and their personal growth importantly. It could be explained by their ambitions to climb into society and professional career.

Statement 9. One more statement researched is related with freedom and responsibility to combine personal life with work, ***“...men and women have to be given equivalent freedom and responsibility to combine their personal life, home and children with work”***. Both groups of students have agreed with the statement equally – 86%. However, students’ comments also reveal some dissatisfaction

about the situation at a workplace and home, “... indeed, with a particular emphasis on “responsibility” part – there are too many stories of men not contributing to either work or home life, so it must be taught that both partners need to contribute equally” (local student). There are also some comments which say that the truth lies somewhere in between, “I would not say that they should be equal but they should take advantage of this” (foreign student).

Statement 10. Another statement related to democratic values was as follows, “**by educating people, and especially, children and young people that they are not limited by the gender, and by helping those in need, we may promote the democracy and tolerance**”. The data prove that foreign students are more confident with their opinion – 95 % of them agreed with the statement. The local students are not so confident – 77% have agreed but 17 % have neither agreed nor disagreed.

Thus, foreign students evaluate the importance of education on gender issues higher. This could be explained by the fact that foreign countries pay more attention to inform and educate people on gender equality. This may help develop a more tolerant and inclusive society. Students’ comments prove that Latvia should follow good examples, “the world is going to be closer to peace if we teach children that there are no limits to our genders but to do that, we need to understand it first by ourselves because there are so many people that have these terrible stereotypes in their heads and they pass them to their children and that is why there is still so much hate in this world” (two local students).

Gender diversity is a many-sided phenomenon. It can also give cause for stereotyping and discrimination. These aspects have been analyzed in the following paragraph.

3. Stereotyping and discrimination as characteristics of gender inequality (statements 11-15)

Gender diversity could promote many positive tendencies in the society/ workplace/at university, however, it could also give rise to conflicts, aggression and intolerance. Then equality turns into inequality characterized by stereotyping and discrimination. Such negative characteristics can stop the progress and development of the society/ workplace/ university. There are several aspects having been researched to see many-sided problems caused by gender inequality.

Statement 11. The first statement related to the gender inequality is aggression because of different perception of gender diversity, “**we live in the society where people are treated differently and are perceived in different ways based on their gender. It could be the reason why the gender equality makes a serious problem and people may be targeted by this kind of aggression**”.

The data prove that foreign students are more confident with their opinion – 73% of them agreed with the statement, whereas, the number of local ones is smaller – 58 %. It is interesting to note that there are quite many students belonging to both groups who neither agree nor disagree with this statement – 26% of local students and 23% of foreigners. The amount of students who disagree with the statement is much higher for local students – 16%. There are not many foreign students who disagree with the statement – only 4%.

Thus, foreign students are more confident that gender diversity could cause aggression. They could be more informed and educated on the issues of gender diversity and equality/inequality. Students’ comments prove that they are concerned of problems caused by gender inequality, “100% agree, already since we are little kids, we have been treated differently just because of our genders and we have been taught what we can or cannot do just because it has not been accepted in our society. We need to treat all of us the same. So we can stop this inequality and hate” (local student). Students also stress on the importance of the environment, “I think people can be treated differently because of their gender but that may be different in different environments and fields. Feels like things are more or less equal in some fields like research, most musical fields, education but in other environments they may not. So I do not want to agree completely because I realise that in some instances there is equality and that is wonderful but I do agree that this issue has definitely not solved yet and many people still experience or have experienced it” (local student).

Statement 12. Another statement also dealt with the gender stereotyping and discrimination, “**people do not have to be compelled to act or feel a specific way dependent on their gender. The biggest reason for the gender discrimination is the gender stereotyping. Everyone has the rights to lead his/her life accordingly to their view without any discrimination**”.

Most of students in both groups agree with this statement: foreigners (91%) and local students (81%). Students' comments prove that they especially emphasize on the impact of family/ school/ university on their views, *"there have been many cases in my life when I have encountered the gender inequality and gender stereotypes. All my childhood I was forbidden to do what boys do, when I got older and wanted to do men's sports, my parents forbade me; when I went to high school, I was obliged to wear dresses to all events and birthdays, it was impossible to cut my hair too short; with the transition to high school every conversation with my parents was accompanied by tantrums and screams, as a result I was caught, now they support me almost in everything and do not tell me what to wear and what to do and what not"* (local student).

Statement 13. One more statement which may cause discussions on gender inequality is connected with a radical feminism, ***"women (radical feminists) have never given up their fight in spite there have been changes how the women feel and value themselves, and are viewed by the society nowadays"***.

The data prove that students' opinions in both groups are different. The number of foreign students who agree with this statement is 68%. There are less local students who have given a positive answer – 47%. There are also quite many students – local (47%) and foreign (30%) who neither agree nor disagree with this statement. It seems that the women status in the society is still sensitive and under discussion, especially in local students' group. Students' comments prove that the fight is still on, *"there are plenty of angles to interpret this question from. Sure, the fight is still going but is that something bad? There are still plenty of challenges and obstacles on the way of equality"* (two local students).

Statement 14. There is one more statement related to the discrimination, ***"...women willingly accept the discrimination in their workplace and family. Accordingly when other people (colleagues/ students/ children, etc.) see the discrimination at their work, university, school or home, they will practice the same in the future"***.

About a half of students disagree with this statement – foreigners (50%) and local students (46%). Then there are quite many local students (37%) who do not have a strong opinion on it. The amount of foreign students is smaller – 20%. There are more foreign students (30%) than local ones (17%) who agree with this statement. Thus, the problem of women discrimination is topical and under discussion. It is still staying very sensitive. The roots of women discrimination hide in the society/ family/ school/ university. Students' comments prove it, *"women will never accept discrimination. More and more it can be seen on a social media that women are speaking against discrimination they go through every day. And they are tired of it. But yes, children see this discrimination every day and they see it as something acceptable because that is what society does and that is how hate already starts growing inside a little child"* (two local students). However, students' comments also state that the root of the problem may hide in the women themselves – their self-respect, *"I suppose it depends on a situation and woman's character. If she is a strong person, she will not accept such attitude to her and will try to change this"* (two local students).

Statement 15. The last statement analysed is related with the never ending fight for gender equality, ***"true equality will never be achieved because of our individuality and competition between sexes"***.

The opinion of both groups does not have considerable differences. Forty-four percent of local students and thirty-six percent of foreigners agree with the statement. The amount of students not having a strong opinion is quite similar in both groups – local students – 32% and foreigners – 30%. There are more foreign students (34%) who disagree with the statement. Only 24% of local students do the same. It could be concluded that the problem of gender equality still exist and will do, *"maybe someday it will be achieved but everyone is competitive these days. Everybody is always trying to prove that he/ she does better than the other gender and it stops us from achieving equality in our lives"* (local student). However, *"the differences among people make us beautiful. Without those differences the world would seem monotonous and boring. Humanity should not view inequality as something that we should get rid of. The fact – no one is equal, does not imply that one is better than the other"* (local student). Thus, the views on gender equality are many-sided. But they are united in their topicality and sensitivity.

Conclusions

The following conclusions have been made based on the results of the study.

- About half of the respondents, both foreign and local students, tend to have a more traditional approach to gender diversity/equality – following an established (customary) pattern of behaviour widely accepted in the given society.
- However, the other part of students (also about 50%) think more untraditionally, beyond traditional paradigms – being influenced by the changes occurring in the external environment, as modern society is becoming more open to new ideas and diversity.
- There is also a tendency for local students to have a more critical and sensitive view on religion and its doctrine, which may be determined by the patterns of behaviour adopted in this country.
- Students emphasize on the influence of family/school/university on their views on gender issues, which are still in the formation process. So, it proves the importance of integrating diversity management into the curriculum as a response to current social challenges.
- Both groups of students consider the education on gender issues to be important. Though, foreign students are more confident with it. It could be due to the fact that in their countries, more attention is paid to inform and educate people on gender diversity/equality, as a demand for a more tolerant and inclusive society.
- Students' views on the women's status in the society are sensitive and under discussion, especially in the local students group, which might be explained that women are still considered to be caretakers of home.


Further research with a broader research base would be beneficial for generalizing the findings of the study. The role of university to manage gender diversity there should be researched in detail to keep pace with time and progress.

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Creative Confidence in Secondary Education: A Systematic Review

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Abstract: This article is predicated on a systematic review of educational examination and academic literature referring to creative confidence as a part and a great influential tool for secondary education. Regardless of the dynamic work of global design company ‘IDEO’ that constructs positive influence through design thinking in 13 areas besides learning and education, there is a lack of practice on creative confidence in didactic learning of the secondary school. To explore the procedure of how secondary school students’ learning may be organized by using creative confidence, scientific articles on design thinking and creative confidence in the classroom have been explored, analysed, and compared. A particular emphasis was put on competency-based learning as a base of any educational curriculum in the 21st century. There was evidence of the influence for the usage of creative confidence as a part of a didactic approach with secondary school students. It was stated that design thinking goes next to creative confidence as a part of it rather than a different term. Further on the findings of this article may be used to adapt creative confidence in both a lesson plan and curriculum of a specific subject.

Keywords: secondary education, creative confidence, design thinking, competencies, TRIZ

Introduction

During the process of acquiring secondary education sometimes the goal for students’ academic achievements is ranked more and higher rather than students’ skills and abilities preferred for the future life. Certainly, by the help of the competence-based approach in education of School2030 where the transversal skills are a part of the implemented changes, teachers still struggle to provide all the necessary activities to develop the skills for students’ future success in higher education and life itself. Secondary school students ought to make choices and comprehend the consequences as an influential part of helping themselves grow and develop (Polirstok, 2017; School2030. A vision of a student n.d.).

According to the list of ten targets provided in Sustainable Development Goal 4 (UNESCO, 2017), one of the objectives that shall successfully promote lifelong learning opportunities for students from early childhood to secondary education by 2030 are: effective learning environments, education for sustainable development, global citizenship, and relevant skills for decent work which coexist with the new scholastic curriculum in all schools in Latvia beginning with the new academic year of 2020./2021 (Andersone, 2019; Skola2030, Pārmaiņu iemesli). Despite the great responsibilities and engagement from governments and ministries of education ‘there are nearly 200 million lower and upper secondary school-age adolescent girls and boys out of school globally and if current trends continue, another 825 million children will not acquire basic secondary-level skills by 2030’ (UNICEF, 2020).

The global establishments IDEO recognized for its human-centred approach, where employers’ expertise in such domains as digital transformation, media, environment, learning & education, circular economy, food science, games & play, health & wellness and more. The founders of IDEO brothers Kelley (Kelley & Kelley, 2013) in their book on unleashing the creative potential prove the connection of design thinking as a base skill of mastering the creative confidence to be opened to implement creative frames of minds and skills. In conformity with the provided data, the IDEO organization, which consists of more than 700 data and behavioural scientists, builders, designers, engineers, entrepreneurs, teachers and research, who develop the confidence to step into the future with optimism and creativity (Design Thinking for..., 2012).

In the ‘innovation gap’ where students are not prepared to face the demands of an intricate world, the skill of creative confidence helps to cover this gap and encourage innovation. To enhance creative confidence such concepts as design thinking and experiential learning are integrated through adjusted exercises during the subjects’ lessons where students are intended to foster deeper learning to build skills necessary to work inventively (Stock et al., 2018; Foster, 2021). The most effective experiences

for creative confidence include magnified understanding of the value of creativity to society and students themselves as well as wider comprehension of various aspects of creativity (Lee et al., 2020).

This is one of the areas to explore from published literature and designed tools on creative confidence which has got some relevance to Latvia's curriculum for secondary education. The creative confidence's prime concept is extended through the design thinking, which is carried out in scientific, educational, business and other environments, to promote creative and positive impact through design and building up the appropriate mind-set, so other people's creative confidence could be imported too, thus, the objectives of the review were:

- to outline the key characteristics of the creative confidence in education;
- to describe the influence of design thinking's implementation in secondary school;
- to outline the role of teachers in facilitating creative confidence advancement in students.

The aim of this article focuses on key characteristics of creative confidence to notify about its successful implementation in secondary education to support the impact and necessity of creative confidence to be implied in syllabus.

Methodology

Although the IDEO mentions the creative confidence as a tool in design, engineering, education and other fields of projects and studies exists since 1991, the studios are in North America, Europe – Munich and London, and Asia – Tokyo and Shanghai, nonetheless, the concept of creative confidence definitely should be transferred further (IDEO at a Glance, n.d.). Thus, to make it possible for the future study, the research extracts the following research questions from the objectives above:

RQ1: What evidence in the literature is there for identifying key characteristics of the creative confidence in education?

RQ2: What scientific outcomes in the literature are there on the influence of design thinking as a tool of creative confidence in secondary education?

RQ3: What proof in the literature is there upon the teachers' role in facilitating creative confidence improvement in students?

The systematic review has been chosen as the main method for the analysis since the universal process involves identifying research questions, creating a specific search strategy, as well as recognizing and describing relevant research in the same field (Pollock & Berge, 2018). Eight scientific articles have been covered in the analysis, which allowed completing the triangulation for qualitative guarantee and verification of interpretation of all eight tasks. The specific literature on design thinking, creative confidence and competencies in secondary education have been chosen to be included in the review. The terms and methods connected with creative confidence as a tool in education were searched and examined. Additionally, the authors have explored Latvia's government curriculum and educational laws, worldwide online documents, journal articles and books. By evaluating selected articles and extracting relevant information from them the clear summaries and the final review were completed validly.

Results and Discussion

To meet the objectives proposed in this study, the search and analysis of published articles creative confidence was carried out. The e-sources were used to find and sort the scientific articles published during the period of 2013 to 2021, since the first time the term appeared in Kelley & Kelley book about the concept of the creative confidence in 2013. The selected journals were the following: Psychology of Aesthetics, Creativity, and the Arts; Journal of Cognitive Engineering and Decision Making; Qualitative Social Work; Innovations in Education and Teaching International; Thinking Skills and Creativity; International Journal of Art & Design Education; and Journal of Transformative Education.

The search was conducted using the websites of SAGE Journals, EBSCOhost, Taylor & Francis Social Science & Humanities Library, Google Scholar, and Web of Science during the month of November 2020 to November 2021. This search was primarily performed using the collocation 'creative confidence' in articles' title and keywords section. From the titles' names those articles that were devoted to education in secondary school or graduates were selected. Finally, 8 scientific articles that addressed the topic of

creative confidence were found during the specific period of publication. The analysis, apart from classifying publications by journals, also targeted to verify the identities of the authors and their research methods. Approximately 75% of the publications were operated through the qualitative research of case studies, whereas quantitative and empirical studies were presented in 25% of the articles on creative confidence. The main results may be observed in the following table (see Table 1).

Table 1

Publications on creative confidence in research journals (2013 to 2021).

The Author(s)	Research Method
Mannay et al. (2021)	Qualitative
Lee et al. (2020)	Qualitative
Lee (2020)	Qualitative
Hamilton et al. (2017)	Qualitative
Beghetto et al. (2020)	Empirical Study; Quantitative Study
Karwowski et al. (2019)	Empirical Study; Quantitative Study
Álvarez-Huerta et al. (2021)	Qualitative
Kijima & Sun (2021)	Qualitative

According to the case study of Arum and Roksa (2011) after two years of college studies, nearly half of students who have not improved their skills from the moment when they had just begun their learning, and one third showed no proceeds after four years. Furthermore, to enhance a variety of skill sets, education must establish opportunities for innovation's implementation that will take up the cooperation and multidisciplinary methods to solve problems (Wagner, 2012). For successful students' readiness two concepts: design thinking and experiential learning should be merged and carried out in syllabus. The combination of these approaches helps to increase awareness of creative problem solving at least in activities which require students to take multiple perspectives. By applying design thinking principles creates a deeper understanding of contextual surroundings. Likewise, experiential learning is a process in which knowledge is created throughout the transformation of experience. Additionally, the better planning of design thinking together with experiential learning leads to boost collaboration and appreciating the importance of different opinions. Moreover, these methods lead to the emphasis, which is placed on the process, rather than the outcomes (Stock et al., 2018; Desender et al. 2018).

Creativity itself and critical thinking are key elements in the process of interpreting an unclear issue into a statement of the problem, distinguishing the necessary information for the problems analysis, and exploiting design thinking to develop a feasible solution to the problem. It is essential for the teachers to provide the basic information before the students are intended to be engaged in the learning process. In a matter of theory-based courses and lessons, a list of expected and assigned readings is crucial. Even though students receive the guidelines through assignments, they get to be engaged in design thinking for the aim of developing the solutions (Peters & Maatman, 2017; Beghetto et al., 2020). Creativity as such can be recognized under four significant categories, identified as the 4Ps, described in the framework, which include: a creative product that is generated from a creative activity, a creative process elaborated with the creation of ideas, a creative person who creates, and a creative press or environmental influences on creativity (Tang and Werner, 2017).

As stated by Lee et al. (2020) and Foster (2021), understanding the concept of creativity and teaching it is a crucial part of nowadays educational institutions. Finding out the methods to expand creativity by learning experience will nurture students' learning abilities: to teach them self-oriented learning and advancement of any skills. Creative learning mostly is valued by students throughout the

educational approach by being involved in risk-taking, authentic, and free-will activities where their self-awareness of their own creativity is represented. One's beliefs appear to be crucial to enhance the self-oriented process for students and their learning. Critical self-reflection should come in one of the habits to stimulate personal growth and confidence in oneself in thinking, perception, and goal setting (Paltoglou et al., 2019; Walsh et al., 2021).

In the case study where students' digital portfolios were analysed in the terms of their creativity course, three main themes arose: creative dynamics, creative mind-sets, and creative confidence. Every portfolio included students' gained experience and insights from class activities, discussions, and projects, various types of presentations, reading and guest speakers. Creative dynamics allows exploring an extended view of the creativity's core in society; creative mind-set is associated with different aspects of creativity noticed in the content as to creative confidence – it contemplates on a deeper dedication with the new perception and changed behaviour which leads to transforming habits of mind and applying a creative solution for a real-world situation. Creative confidence can be performed by assessing what students exactly acquired during the specific period - the semester, an academic year – by the aid of the three subthemes: courage to leap, challenging oneself, and creative authenticity (Lee et al., 2020; Graham & Flamini, 2021).

The innovation creation process can be described as two independent stages: the first is the formation of new knowledge; the second is the application of new knowledge in practice (Karwowski et al., 2019). Process of innovation, which consists in the application of the latest educational theories, new forms of organization of the educational process, for example: project-based learning technologies, curricula on a free basis, which consider the individual interests of students (Basyuk & Antipenko, 2019). Consistent with Basyuk and Antipenko (2019) the most difficult areas of development of the mechanism for managing the quality of educational services based on the introduction of innovations are:

- creating an assessment of the competitiveness of the university and determining its regional level in the educational services market;
- determination and selection of the most optimal innovation strategies;
- creation of an assessment of the quality of educational services provided by the university based on the interaction of the university's innovation activities with innovative activities of partner enterprises.

Educators need to improve the level of their competence which is described in Table 2. This need is especially important in the professional activity of a teacher. The teacher should be competent in the subject area, methodically literate, possessing information and communication technologies, possessing the ability to establish communication with all participants in the educational process, able to work with children special educational needs: gifted, with disabilities, with behavioural deviations (Erokhina, 2019).

Table 2

Scheme of labour functions and professional competencies of a teacher.

Labour function			Professional competence	
<i>knowledge</i>	<i>skills</i>	<i>actions</i>	<i>obligatory</i>	<i>recommended</i>
Taught subject. Fundamentals of teaching methods, basic principles of the activity approach, types, and methods of modern pedagogical technologies.	Use and test special approaches to learning to include all students in the educational process, including those with special educational needs.	Planning and conducting training occupations: lesson structure; content of educational material; methods and techniques of the teacher's work.	Readiness to use tools and methods for planning and conducting training sessions.	Own the methods of organizing work on the formation of an environmentally sound, healthy, and safe lifestyle, including the rational organization of the educational process and the educational environment.

Labour function			Professional competence	
<i>knowledge</i>	<i>skills</i>	<i>actions</i>	<i>obligatory</i>	<i>recommended</i>
Ways to achieve educational results and methods evaluating results learning.	Objectively evaluate learners' knowledge based on testing and other methods control in accordance with real educational opportunities for children.	Systematic efficiency analysis training sessions and approaches to training.	Willingness to own methodology for analysing the effectiveness of training activities and approaches to training.	Own the technique knowledge generation and personal skills hygiene, skills take care of your own health, personal security, own ways of providing first medical help.

According to Gin (Гин, 2016) TRIZ-pedagogy is a pedagogical system, the main objective of which is to direct a creative person who is able to find the most unconventional solutions in different areas of life. The abbreviation TRIZ stands for theory of inventive problem solving (теория решения изобретательских задач) which was originated in the middle of the twentieth century by the science fiction writer and scientist Heinrich Altshuller. He himself invented from childhood, and when he grew up, he realized that inventors are not born, but they become ones.

To do this, certain principles should be followed (Гин, 2016):

1. The principle of freedom of choice. Teachers cannot impose on the student how and what to do. The students are more willing to do what they invented and suggested themselves.
2. The principle of openness. The students need to be shown the methodology and techniques, but they must solve the problem, find solutions, and generate ideas on their own.
3. Principle of operation. The more problems students solve, the faster they develop the habit of looking for something new, and the quantity will grow into quality faster.
4. The principle of feedback. A teacher or mentor should always control the learning process, answer questions. Not to help, but to push forward.
5. The principle of the priority of the developmental function. The students must strive to improve their own performance: without the pressure of a mentor or parents.

TRIZ-pedagogy is based on methods and technologies that allow mastering ways to remove psychological inertia RTV - development of creative imagination (РТВ – развитие творческого воображения) ; methodology for solving problems based on the laws of development of systems, common principles for resolving contradictions and mechanisms of application to solving specific creative problems OTSM - general theory of strong thinking (ОТСМ – общая теория сильного мышления); educational a system based on the theory of creative personality development TRTL (теории развития творческой личности ТРТЛ). In general, TRIZ pedagogy fosters the ability to see in any systems contradictions that hinder development, the ability to eliminate these contradictions, the ability to perceive any object, any problem comprehensively in all the diversity of their connections (Bykova et al., 2020).

To form strong creative thinking in the TRIZ system, the following methods are used (Utemov & Gorev, 2014):

- brainstorming - finding a large number of ideas and solutions on one given topic or within a certain period of time;
- synectics - a method of enhancing students' knowledge based on the selection of personal, direct, symbolic, fantastic analogies;
- mnemonics - a system of TRIZ techniques to simplify the memorization and reproduction of information;

- method of focal objects - the search for new creative solutions through associative series and transferring associations to other objects; for example, a TV set can be portable, and a flower is fragrant, then what will a portable flower and a fragrant TV look like;
- the catalogue method is the creation of fairy tales based on their basic elements: beginning - special circumstance - prohibition - violation of the prohibition - actions of the enemy - victory of the hero over the enemy with the help of a magic object or assistant - returning home.

Conclusions

Creative confidence is a notion which represents the belief of a person in oneself through all the possible and actual failures which may appear in a learning setting. Human-centred approach has a huge deal in the concept of creative confidence, since such terms as design thinking, experiential learning, and competences. If the IDEO organisation orients its goals on the development and usage of creative confidence in different spheres for adults and students, the TRIZ-pedagogy, however, is oriented on the development of students' creative imagination. Nonetheless, both approaches are successfully forming a creative mindset of a student who is willing to take risks, explore and set his or her own goals for future achievement.

The best assignments for students to develop their creative confidence not leaving behind the curriculum are those which provide a chance for a student to set the goal, follow it, and analyse at the end after some specific time; for instance: brainstorming activities and students' portfolios. Nevertheless, teachers should be aware not only of the skills, knowledge they gain during their learning process, but also about their obligatory and recommended professional competencies.

The findings of this review suggest that to provide the opportunity for students in secondary school to explore themselves and successfully achieve anything, creative confidence should be used wisely in lessons. In the further research the main aspects and differences of the IDEO and TRIZ may be studied and explored more.

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Dimensions of Emotional Intelligence for Supporting Childless Employees in Higher Education Institutions: A Systematic Review

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Abstract: In recent years' childlessness as a workplace inclusion issue has developed from a taboo topic into an important awareness subject, especially being childless not by choice. This issue has become challenging for employers and leaders not only in business organisations but also in educational institutions. That includes such aspects as to be prepared with how to support employees within different struggle of life and to be aware of discussion and conversation topics. The article presents the systematic literature review on subject of emotional intelligence as an attribute of effective leadership which can be increased into higher education institutions. The aim of the study is to explore main findings of emotional intelligence in the context of effective leadership for supporting childless employees in higher education institutions. Since the context of childlessness and emotional intelligence has not been previously studied, author of this article decided to use the systematic review method including publications which were published in respectable databases (EbscoHost, Scopus, Science Direct, Emerald Publishing, Elsevier, Sage Journals) during the past ten years. The authors' review has helped to identify some of the main findings about models and dimensions of emotional intelligence, importance of emotional intelligence as an attribute of effective leadership in organisations and higher education institutions. Conclusions include future recommendations for higher education institutions and development of leaders and employees about emotional intelligence aspects and future research perspectives about terminology of childlessness and childlessness aspects at workplace. Most important conclusions highlight the necessity to improve work-life programs and policies of organisations including childlessness aspects as a workplace inclusion issue; the importance to study relationship between emotional intelligence of higher education institutions leaders and childlessness aspects in higher education institutions. The significance of the results is due to the fact that this is a completely new topic in management science in Latvia and future research should be carried out.

Keywords: emotional intelligence, higher education institutions, leadership, childlessness, leader

Introduction

The concept of emotional intelligence (EI) has gained popularity as a potential primary attribute of effective leadership. Soft skills such as EI have become relevant in leadership effectiveness and organizational success. Organizations the world over face challenges today which require reforms in the management and governance styles. Higher education institutions (HEI) are not exempt from it and therefore need to rethink their strategies to address the issue. (Mamuli, 2020)

In author's opinion, EI serves as a significant tool that helps the leaders of HEI to meet the societal challenges that disturbs the balance of inclusive workplace environment. Nowadays leadership is about human qualities and ability to understand, to use and to manage emotions. The need for humanizing leadership has become a topicality.

Studies have demonstrated that leaders who consistently outperform their peers not only have the technical skills required, but more importantly, have mastered most of the aspects of EI. There is growing evidence that the range of abilities that constitute what is now commonly known EI plays a key role in determining success, both in one's personal life and in the workplace. (Batool, 2013)

According to Mård (2020), there is still something at workplace that is barely touched related to organizational life and work life. Differences in parenthood status often remain hidden under the surface of the formal sides to organizations, but it still greatly affects life at work. Hearing news about pregnancies, meeting co-workers' new born babies or interacting with parents who are proud or deeply anxious over their children's endeavours are often inevitably features of work life. For those who are childless not by choice it may cause tensions, struggles and feelings of inadequacy in relation to

certain professional identities, causing existential identity work that is accompanied with demanding internal emotional struggles.

Referring to it author of this article stresses that childlessness in contemporary societies is a relatively new research topic and there is no established theoretical framework for studying it. Previous studies have distinguished childlessness as a voluntary decision (childfree) from involuntary childlessness (childless), although there is considerable ambiguity in how these two are defined. (Miettinen & Szalma, 2014)

According to The Organisation for Economic Co-operation and Development (OECD, 2018), rates of childless at age 40-44 or around are increasing in most of those OECD countries where data are available for both time points. In many cases the size of changes is not directly comparable across countries because of differences in the years of reference and in some cases also definitions. Nonetheless, in Finland for example, the proportion of 40-44 women that are childless increased by over 5 percentage points between 1990 and 2010, while in the United Kingdom rates of childlessness for women aged 45 increased by 6 percentage points between 1995 and 2010. Only four OECD countries (Chile, Luxembourg, Slovenia and Turkey) with available data see the rate of childlessness fall between their two time points, with the decrease in Luxembourg (from 19% in 1991 to 15% in 2001) particularly large.

From the point of view of the author, childlessness is one of the topical aspects to pay attention to in any workplace, including HEI, and which requires high level of EI from the leaders. On this basis firstly the theoretical research needs to be done to understand how EI as an attribute of effective leadership could relate to childlessness in HEI as a workplace.

The research presented in the article is part of larger project analysing how emotional intelligence as an attribute of effective leadership could be used for supporting childless employees. This is one of the first part of extensive study discovering theoretical background of main findings.

The aim of the study is to explore dimensions of emotional intelligence in the context of effective leadership for supporting childless employees in higher education institutions.

Methodology

The research questions of this article are: (1) what is the framework of EI models and dimensions and (2) how does it look the perspective of future recommendations.

Since the context of childlessness and emotional intelligence has not been previously explored, author of this article chooses to use the systematic review method to focus on exploring a new direction on the topic of emotional intelligence of leaders in HEI as this type of method is intended to address new, emerging topics.

A systematic review should be conducted before empirical research, and a subset of the literature from the systematic review that is closely related to the empirical work can be used as background review. In that sense, good stand-alone reviews could help improve the quality of background reviews (Xiao&Watson, 2019).

Author started the literature search by using the keywords “emotional intelligence in higher education”, “emotional intelligence and higher education”, “emotional intelligence and leadership”, “emotional intelligence and leadership in higher education institutions”, “emotional intelligence and childlessness”. For each manuscript, preliminary relevance was determined by title. From the title, if the content seemed to discuss the topic of emotional intelligence, leadership or/and HEI, author obtained its full reference, including author, year, title, and abstract, for further evaluation. Unfortunately, no literature by using such keywords as “emotional intelligence and childlessness” was found.

To survey articles in the literature, the following databases were used: EbscoHost, Scopus, Science Direct, Emerald Publishing, Elsevier, Sage Journals. The limit of publication date was set for past ten years (2011 – 2021). After reviewing potentially relevant articles a total of sixteen (16) studies were included in this research. Author only included studies written in English.

From each study, author extracted information on the following subtopics: (1) models and dimensions of EI, (2) summary of main findings of the study about EI and leadership in higher education, (3) common keywords and (4) future recommendations.

As Snyder (2019) states, systematic review can be explained as a research method and process for identifying and critically appraising relevant research, as well as for collecting and analysing data from said research. By using explicit and systematic methods when reviewing articles and all available evidence, bias can be minimized, thus providing reliable findings from which conclusions can be drawn and decisions made.

Results and Discussion

HEI are primarily people focused organizations, where leaders in every level can benefit from having an understanding of EI and usage of it within their leadership roles. Author emphasizes that EI is more than simply being nice. It's about developing an environment that respects each other's emotions and allows inclusion of diverse people and discussion topics.

According to the article of Gentil (2021) in *Harvard Business Review*, for decades, the traditional view was that to be successful, leaders had to be infallible, unflappable, in control, and fearless. These leaders appeared to be born hero leaders, but that are no longer what companies need. The most effective leadership today - at all levels - isn't about technical expertise and having all the answers. Besides articulating a compelling vision, it's about being human, showing vulnerability, connecting with people, and being able to unleash their potential.

Models of EI of different authors has been the subject of practically all articles included in this review. Framework of EI models and dimensions and authors discussing these models are described in (Table 1). As seen, the most popular is Goleman's model, Bar-On's model and Salovey and Mayer model where EI is defined as set of different competencies for effective leadership.

Table 1

Summary of authors discussing models of EI

Framework of EI models and dimensions	Authors
In Goleman's model EI is defined as a set of competencies falling into five broad areas as follows: self-awareness, self-regulation (self-management), motivation (awareness of others), empathy and social skills (management of social relationships). The first three skills relate to personal competences and the last two to social ones.	Batool, 2013; Kahtani, 2013; Parrish, 2013; Junias & Abigirl, 2015; Kadagidze, 2017; Livesey, 2017; Maamari & Majdalani, 2017; Issah, 2018; Othman & Muda, 2018; Cherkowski et al., 2020; Mamuli, 2020; Rajee et al., 2020; Halimi et al., 2021; Sadiku et al., 2021; Shehhi et al., 2021
Bar-On's model consists of the key components of effective emotional function and the social that leads to psychological well-being. It covers five broad areas of competencies: the intrapersonal skills (self-regard, emotional self-awareness, independence, assertiveness and self-actualization), the interpersonal skills (interpersonal relationship, social responsibility and empathy), stress management (stress tolerance and impulse control), adaptability (reality testing, flexibility, and problem-solving) and general mood (optimism and happiness).	Batool, 2013; Kahtani, 2013; Parrish, 2013; Junias & Abigirl, 2015; Maamari & Majdalani, 2017; Cherkowski et al., 2020; Halimi et al., 2021
Salovey and Mayer model defines EI as a type of intelligence reflecting the ability to process emotional information in four dimensions: self-emotional appraisal (perceiving emotion), others' emotional appraisal (using emotion to facilitate thought), regulation of emotion (understanding emotion) and use of emotion (managing emotion).	Batool, 2013; Kahtani, 2013; Parrish, 2013; Junias & Abigir, 2015; Li et al., 2015; Kadagidze, 2017; Livesey, 2017; Issah, 2018; Othman & Muda, 2018; Cherkowski et al., 2020; Sadiku et al., 2021
Higgs and Dulewicz model states that there are seven skills of EI which are self-awareness, emotional resilience, motivation, accuracy,	Kahtani, 2013

Framework of EI models and dimensions	Authors
integrity, influence and interpersonal sensitivity.	
Goleman-Boyatzis model identifies the competencies associated with awareness of the self and others and the management of one's self and others. EI is observed when a person demonstrates the competencies that constitute self-awareness, self-management, social awareness and social skills at appropriate times and ways in sufficient frequency to be effective in the situation.	Livesey, 2017

All models of EI included in (Table 1) explained the dimensions of EI differently but the researchers stated the EI in same basic which are recognizing emotions, understanding them and use them effectively. Singh et al. (2007) cites Goleman, that three of the most important aspects of EI for a leader's ability to make effective decisions are self-awareness, communication and influence, and commitment and integrity. Managers who do not develop their EI have difficulty in building good relationships with peers, subordinates, superiors and clients.

From the literature review emerges the premise that the EI attributes of self-awareness, self-management and self-confidence are important in leadership and play a part in sustaining emotional resilience; and that a deep sense of self-awareness as well as self-acceptance are necessary if leaders are to avoid putting themselves under unreasonable pressure. (Steward, 2014)

EI is an essential attribute of the leadership of all leaders in higher education (HE). The literature in this emerging field contains a range of information which can tend to be confusing and includes the term EI and HE. While it is helpful to have a relatively concise dimensions of EI to guide leaders' thinking, deeper analysis of its scope and meaning in HE is needed. (Table 2) provides a summary of the main findings of the study about EI and leadership in HE, developed from a content analysis of the literature.

Table 2

Summary of common keywords and main findings about EI and leadership in HE

Theoretical category	Author/s	Common keywords
Emotional intelligence	Batool, 2013; Kahtani, 2013; Maamari & Majdalani, 2017; Issah, 2018; Othman & Muda, 2018; Halimi et al., 2021; Sadiku et al., 2021	Emotional intelligence, leadership, performance, organization, emotions
	Summary of the main findings	
	Findings show (Maamari & Majdalani, 2017; Sadiku et al., 2021) that EI is a key component of effective leadership which is crucial to the performance and success of individuals and organizations. Also there is a positive and meaningful relation between EI and functional factor and contextual performance (Kahtani, 2013). Authors (Batool, 2013; Issah, 2018; Othman & Muda, 2018) emphasize that EI can be applied to effectively manage the change process; manage, understand and perceive emotions of leaders themselves and others; help to reduce stress, improve performance and sense of achievement by motivating employees within the organization; achieve organizational goals in an ethical way by putting positive impact on the society as a whole. Some authors have studied gender differences but study results show that the overall EI levels are equivalent in men and women and no gender differences exist (Halimi et al., 2021).	
Leadership, leader	Author/s	Common keywords
	Batool, 2013; Parrish, 2013; Kahtani, 2013; Junias & Abigail, 2015; Li et al., 2015; Kadagidze, 2017; Livesey, 2017; Maamari & Majdalani, 2017; Othman & Muda, 2018; Cherkowski et al., 2020; Sadiku et al., 2021; Shehhi et al., 2021	Emotional intelligence, leadership style, effective leadership, performance
	Summary of the main findings	
The idea of findings of more authors (Batool, 2013; Kahtani, 2013; Parrish, 2013; Junias &		

Theoretical category	Author/s	Common keywords
	<p>Abigirl, 2015; Li et al., 2015; Maamari & Majdalani, 2017; Cherkowski et al., 2020; Sadiku et al., 2021; Shehhi et al., 2021) is that emotionally intelligent managers know how to build a connection between people; promote decision-making and lead change effectively; do not want to evoke negative emotions in followers; ignite worker passion and create healthy, happy, fully engaged work environments; know when, how and what support employees need; gives more attention to positivity, emotion and engaging with others to create belonging, appreciation and meaningfulness at workplace which develops sustainable wellbeing and shows more sympathy and recognition towards employees.</p> <p>Some authors (Parrish, 2013; Junias & Abigirl, 2015; Kadagidze, 2017) emphasize that leaders with high EI responsibly manage themselves, their emotions, feelings and impulses; they inspire and guide others, and responsibly manage oneself; they rarely make rushed or emotional decisions, stereotype team members or compromise their values; they provide professional relationships with others and maintain a high standard of conduct providing a positive role model for others.</p> <p>Therefore few authors (Batool, 2013; Livesey, 2017; Othman & Muda, 2018) highlights the top competencies for leaders with high EI: organisational and self-awareness; trustworthiness; empathy; teamwork and collaboration; emotional self-control and a strong mix of cognitive capacity (logical, conceptual and creative thinking) and people skills (interpersonal, influence and communication).</p>	
Higher education (HE), higher education institutions (HEI)	<p align="center">Author/s</p>	<p align="center">Common keywords</p>
	<p>Parrish, 2013; Kadagidze, 2017; Maamari & Majdalani, 2017; Cherkowski et al., 2020; Mamuli, 2020; Rajee et al., 2020; Halimi et al., 2021; Sadiku et al., 2021</p>	<p>Higher education, (academic) leadership, (academic) leader, emotional intelligence, management</p>
	<p align="center">Summary of the main findings</p>	
	<p>Findings of few studies show that leaders in HE are often assigned to leadership positions with little or no preparatory leadership training or development and are expected to learn on the job (Parrish, 2013) and that role of leaders of HEI combine the work of both teaching and administrating as they involve lecturing and leadership of their particular faculty, department, centre and unit (Rajee et al., 2020).</p> <p>Following to that authors emphasize that EI is a highly relevant and significant requirement for leadership in HE (Mamuli, 2020; Kadagidze, 2017) and leaders of HEI should learn about it at all. Findings shows that many HEI have started to incorporate EI-related components into their curriculum (Sadiku et al., 2021) and that leadership capacity development initiatives in HE should include a focus on developing EI understanding and skills (Mamuli, 2020).</p> <p>According to Cherkowski et al. (2020) leaders in HE have a role to play in the living ecosystem of the social constructed workplaces of faculty, staff and students. That means that leadership in HE can create conditions in their work cultures that shift toward wellbeing of whole employees. In addition, Maamari & Majdalani (2017) conclude that an awareness of gender and cultural difference related to EI could be beneficial to all parties – students, educators and administrators – in HEI.</p>	

Some of the authors studied in this systematic review discussed future recommendations in purpose to increase the level of EI not only for effective leadership but also for other areas, for example:

1. Few suggestions about professional development and training programs for (further) leaders and employees within organization where highlighted:
 - Shehhi et al. (2021) suggests that leaders of educational institutions need to improve the levels of EI and be aware of emotional knowledge. This can be achieved by implementing professional development and training programs including sessions on EI to increase leaders' effectiveness as HEI leaders.
 - Maamari & Majdalani (2017) recommends organizations add to their people's development agendas the training for EI enhancement to all levels, age groups and educational backgrounds.

- According to Issah (2018) to build the needed capacity of world-class leaders for organizations, EI skills need to be incorporated in the capacity building program.
2. Specific recommendations for HEI also where stated:
- According to Mamuli (2020) HEI should invest in leadership capacity development initiatives that are designed to prepare and further develop future and existing leaders.
 - Othman & Muda (2018) states that the entrepreneurship education curriculum should emphasise the EI of students in addition to the practical and theoretical aspects of entrepreneurship, allowing them to develop the abilities required to face challenges and competition in the business world.
 - Rajee et al. (2020) believes that responsiveness about EI and its significance in attaining the leadership goals must be recognized among the academic leaders. Also EI and leadership quality skills could be incorporated in the study programs to improve EI skills among students so they can gain leadership competencies which can help to their future success.

Analysing the main findings, author of this article concludes that EI is important for effective leadership in the context of workplace inclusion issues, and need to be given attention nowadays.

Author also agrees with Barchard (2003), that the concept of EI overlaps with constructs such as social intelligence (the ability to understand others and act wisely in social situations), empathy (the ability to understand others' feelings and the tendency to experience others' emotions vicariously), alexithymia (difficulty understanding and describing feelings), and emotion regulation (the ability to regulate ones' emotions as desired).

The author of the article agrees with Dulewicz and Higgs (2003) that the higher one rises within an organization, the more important EI becomes. EI is an important aspect of leadership and that it becomes more significant as one progresses up the leadership hierarchy. There is much evidence that the leadership of an organization has a great influence on its culture.

Conclusions

The authors' systematic literature review reported in this article have helped to identify the main conclusions and future research perspectives:

1. Summary of models and dimensions of EI highlights main EI attributes for effective leadership such as organisational and self-awareness; trustworthiness; empathy; teamwork and collaboration; emotional self-control and a strong mix of cognitive capacity and people skills.
2. Emotionally intelligent managers know when, how and what support employees need giving more attention to healthy, fully engaged and meaningful work environment which develops sustainable wellbeing and recognition towards employees. Leaders with high EI know how to create connections and professional relationships with others, control emotions and feelings of themselves, make non-emotional and responsible decisions, inspire and guide others providing a positive role model for them.
3. Leaders in HE are often promoted to leadership positions from teaching or administrative positions with little or even no preparatory leadership training and are expected to learn on the job which shows possible lack of knowledge of EI as an attribute for effective leadership. Findings show that the overall EI levels are equivalent in men and women as well as no gender differences exist but an awareness of gender and cultural difference related to EI could be beneficial to all parties in HEI (students, educators, administrators, leaders).
4. As the EI can impact the achievement of organizational goals, improve performance and motivation of employees, leaders of HEI need to improve the knowledge about EI and its dimensions by attending professional development and training programs. EI is a highly relevant and significant requirement for leadership in HE, and that not only leaders and employees of HEI need to develop knowledge about EI understanding and skills, but EI-related components should be incorporated into curriculum of study programs.
5. Organizations should improve their workplace policies and work-life programs with trainings or seminars for EI enhancement to all levels, age groups and educational backgrounds. Thus

could include childlessness as a workplace inclusion issue too. Professional development and training programs could be developed to increase leaders' knowledge on EI and effectiveness of HEI leaders.

6. Further research of EI and HEI leaders in Latvia should be explored to evaluate leader's knowledge and skills about EI as well as level of readiness to think about childlessness as a workplace inclusion issue. Relationship between EI of HEI leaders and childlessness aspects in HEI as a workplace should be studied. A survey of HEI employees needs to be performed to find out potential parenthood status of employees in HEI and their opinions of childlessness aspects and problems in HEI of Latvia. Terminology of childlessness needs to be reviewed and compiled to decide which keywords are appropriate to use in future research not only in English, but especially in Latvian as it's a new topic in management science in Latvia at all.

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Musical Activities of Primary School Students and Parents' Engagement in Remote Music Learning during the Covid-19 Pandemic

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Abstract: The impact of the Covid-19 pandemic on the learning process of music in primary school determined the topicality of the paper. The aim of the study is to define the musical activities of primary school students and parental engagement in remote music learning during the Covid-19 pandemic. Previous studies on students' motivation to learn music remotely, teachers' readiness to teach music online and parental engagement in musical activities of students were analysed, as well as an empirical study was carried out to achieve the study aim. The empirical study involved 162 (N=162) students aged eight to nine. A questionnaire was conducted to determine students' musical activities and parental engagement. The statements in the questionnaire were grouped into four study scales: parental engagement in students' musical activities; students' independent musical activities; music genres that students prefer; the language in which students sing or listen to music. Descriptive statistics, ANOVA, Cronbach's alpha, and Pearson coefficient were used to analyse the study results. The study found that the parents watch musical shows and listen to music with their children more than sing or play a musical instrument. By analysing the students' independent musical activities during remote music learning, it is determined that the dominant type of musical activity that both boys and girls prefer is listening to music. Primary school students use different types of music: folk music, classical music, and popular music. The study found that girls like folk music, while boys choose popular music genres. Students whose native language is not the official state language prefer to sing in both languages. However, they listen to compositions and dance to the music written in their native language. The study concluded that boys spend less time doing musical activities than girls, and that parental engagement in musical activities is essential for primary school students during remote music learning.

Keywords: musical activities, primary school student, remote music learning, music learning in Covid-19 pandemic.

Introduction

The Covid-19 pandemic has made remote music lessons an integral part of the pedagogical process. At the beginning of the pandemic, when schools were closed for several months in several countries, including Latvia, the teachers mostly kept in touch with students by organizing the music learning process remotely. The intensive acquisition of educational technology could ensure an effective music learning process online during the second wave of the pandemic. Remote music lessons require more student independence and greater parental engagement in the learning process than face-to-face lessons. Active participation in online music lessons and the ability and willingness to engage in musical activities can show the attitude toward music even without the teacher's encouragement and involvement in remote learning.

Primary school students need parental support to learn music remotely and online. A previous study also revealed that students in primary education are not yet fully prepared to learn music independently and remotely (Stramkale, 2021). A situation in which a child needs almost always learning support causes frustration among parents. Researchers, Lau, Li & Lee, found out that parents' dissatisfaction is related to the length of online learning and the number of tasks assigned. The student's ability to learn independently would increase the parental satisfaction scales (Lau et al., 2021). Similar data were obtained in Italy as researchers found that two-thirds of parents were dissatisfied with remote learning because they had to replace a teacher and put in an extra effort (Scarpellini et al., 2021).

The students, who are exposed only to online and remote learning opportunities due to the global pandemic, miss the traditional sources of motivation. A study conducted by Hadjikoou also shows that

students' motivation to learn music remotely decreased during the year (Hadjikou, 2021). Therefore, it is necessary to look for other opportunities that help motivate students in the primary education stage to learn music remotely. For example, to develop an interest in music. Tossavainess's & Juvonen's study revealed that the interest in music can be generated by the joy associated with the learning process of music subject and by explaining the importance and usefulness of music to the students (Tossavainess & Juvonen, 2015). It means that the teacher should think about what musical activities could make primary school students happy and help to understand the importance of music subject. Besides, the musical activities implemented in the music learning process has to be close to the activities that students prefer outside school. Several researchers also believe that music has faced significant challenges to bridge the gap between music in students' life and what happens at school (Hallam, Creech & McQueen, 2018). Therefore, the content of learning should be developed according to the student's individual musical needs (Mills, 2009) and the musical activities that seem personal and motivating to children should be implemented in the learning process (Dunn, 2014). A study conducted by De Vries revealed that students between the ages of 12 and 13 prefer contemporary popular music rather than other styles of music (De Vries, 2010). It is essential to think about new ways of teaching and learning to engage students in musical activities that are relevant to their life.

The Covid-19 pandemic has created not only challenges but also new opportunities for change. Implementing a new practice or change depends on the music teacher's ability to adapt to learning music remotely. Over the past year, several researchers have determined to study the readiness of music teachers to teach music remotely. In Spain, researchers Calderón-Garrido & Gustems-Carnicer interviewed 335 teachers to determine how they adapt to teaching music remotely. The study found that teachers prefer contemplative activities and communicate more with the students, and they believe there is a lack of methodological and material resources (Calderón-Garrido & Gustems-Carnicer, 2021). In turn, a study conducted in Hong Kong revealed that teachers experience stress, fear and anxiety when teaching music remotely. They are concerned about the effectiveness of music teaching, parental preferences, and the students' ability to adapt to learning (Cheng & Lam, 2021).

The aim of the study is to define the musical activities of primary school students and parental engagement in remote music learning during the Covid-19 pandemic.

Methodology

The study raised four research questions:

- RQ1: What is the involvement of parents in students' musical activities?
- RQ2: What musical activities do students engage in independently, and how often they do that?
- RQ3: What styles of music do students prefer when learning music remotely?
- RQ4: In what language do students listen to music and sing songs?

Participants. The study was carried out in Latvia between April 2020 and May 2021, when face-to-face classrooms often were replaced by remote learning because of the Covid-19 pandemic. The study involved 162 (N = 162) students (59% girls and 41% boys) aged eight to nine. The study sample has a common feature - the native language of the respondents is different from the official state language. The students who participate in this study attend a Latvian school that implement minority education programs.

Data Collection Instrument. A questionnaire was conducted to answer the research questions and achieve the aim of this study. The questionnaire contained 17 statements. The students were asked to rate each item on a four-point Likert scale as follows: 1 - never, 2 - rare, 3 - often, and 4 points - always. The internal validity of the study statements is high, as Cronbach's alpha factor scored 0.79. The items were structured on four study scales. The first scale identified students' musical activities that the parents were involved in. The parental engagement level in their children's musical activities is low if the score is from 1.00 to 2.00, middle if it is from 2.01 to 3.00 and high from 3.01 to 4.00. The second study scale described the students' musical activities that they participate in independently. The third one made it possible to define which style of music the primary school students prefer while learning music remotely. The fourth study scale identified the language in which the students listened to music and sang songs.

Data Collection Procedure. The participation in the questionnaire was voluntary and anonymous. Each student had the opportunity to refuse to participate in the study. Data were obtained frontally in small groups of 10-15 students each. There was no time limit to complete the questionnaire, and none of the students needed more than 15 minutes to complete it. The results obtained in the study were used in a summary form for study purposes only, which was presented to the respondents before completing the questionnaire.

Data Analysis. The study data were coded and entered into the SPSS 22 data processing program. The following descriptive statistics were calculated for the 17 statements and the four scales: mean value (M), standard deviation (SD) and standard error (SE). ANOVA was used to compare the differences between the two samples (girls and boys). The Pearson coefficient was calculated to determine the correlation between the established study scales.

Results and Discussion

The first study scale examined parents' engagement in the students' musical activities while learning remotely. There were no significant differences between the opinions of the boys and girls about the musical activities doing with their parents. Most parents with their children watch musical shows on TV (M=2.39, SD=0.892; M=2.30, SD=1.074) and listen to music (M=2.70, SD=0.921; M=2.33, SD=1.163). Both of these questionnaire items were rated by students at a middle level (Table 1). The correlation coefficient indicates that the students watch music on television with their parents if they enjoy listening to music ($r = 0.335$, $p < 0.01$) but attend musical events if they like singing ($r = 0.226$, $p < 0.01$). The students sing more with their parents when they enjoy dancing to the music ($r=0.301$, $p<0.01$). The study identified a link between joint parent-child listening to music and playing musical instruments ($r=0.326$, $p<0.01$). This is a positive sign, as making music with parents encourages students to involve in several musical activities during the music lessons. The children listen together with their parents to popular music more than other styles of music ($r=0.344$, $p<0.01$). Lum also, while studying the 1st-grade students' musical environment in the family, has concluded that children's songs are a small part of the repertoire, but popular music is the favourite (Lum, 2008).

Table 1

The engagement of parents in students' musical activities

Statements	Gender	M	SD	SE
We attend musical events together	Girls	2.08	0.918	0.132
	Boys	1.84	0.833	0.145
We watch music together on TV	Girls	2.39	0.892	0.128
	Boys	2.30	1.074	0.187
We sing together	Girls	1.91	1.007	0.145
	Boys	1.51	0.905	0.157
We listen to music together	Girls	2.70	0.921	0.133
	Boys	2.33	1.163	0.202
We play musical instruments together	Girls	1.75	1.021	0.147
	Boys	1.54	0.971	0.169

Both girls and boys assess activities that require music-making at a low level: singing (M=1.91, SD=1.007; M=1.51, SD=0.905) and playing musical instruments (M=1.75, SD=1.021; M=1.54, SD=0.971). If the students themselves do not play any musical instruments in their daily life, then the engagement of their parents in this activity is also low as well ($r=0.333$, $p<0.01$).

Primary school students need parental encouragement to start playing musical instruments. A Canadian music teacher also believes that teachers should encourage and motivate parents to participate in their children's musical education, as they do not have the skills needed to practice playing a musical instrument on their own at this age (Briscoe, 2016). Reeves has studied the reasons that encourage parents to support their children's desire to learn to play one of the musical instruments. The researcher concluded that parents do not associate music with the development of

valued character traits, the child's social or educational level. But the parents encourage children to play a musical instrument because they have talent, making music unite the family and forming a common cultural identity (Reeves, 2015).

Family involvement in the child's musical activities is needed when learning music happens remotely, as the student cannot meet face-to-face with classmates. A study conducted by Raschdorf, May & Searcy proved that the engagement of family members in the learning process promotes children's socio-emotional learning, self-confidence and social awareness competencies, responsible decision-making skills and positive relationship skills (Raschdorf, May, Searcy, 2021). Unfortunately, a study by Kreutz & Feldhaus revealed that parental engagement in musical activities decreased as their children became older and older, and it is determined not only by parents' income but also by the level of education. Only one third of parents were engaged with their children aged 7-8 in singing or playing musical instruments (Kreutz & Feldhaus, 2018). The data obtained in this study are also similar.

The second study scale found out what musical activities the primary school students engaged in independently while learning remotely. There was found a significant difference in the opinions of girls and boys about singing ($F = 13,659$, $p = 0.000$), about dancing to music ($F = 5.510$, $p = 0.021$), and how much time is devoted to doing musical activities by themselves ($F = 6.824$, $p = 0.011$). Girls sing ($M=3.06$, $SD=1.039$; $M=2.18$, $SD=1.073$) and dance to music ($M=2.68$, $SD=1.187$; $M=2.06$, $SD=1.170$) at home more independently than boys (Table 2). Furthermore, the boys are more interested in non-music activities, so they play musical instruments and listen to music in their daily life less than the girls ($M=1.54$, $SD=0.665$).

Table 2

Students' musical activities during remote music learning

Statements	Gender	M	SD	SE
I sing	Girls	3.06	1.039	0.150
	Boys	2.18	1.073	0.186
I listen to music	Girls	3.45	0.849	0.122
	Boys	3.12	0.892	0.155
I play one of the musical instruments	Girls	1.68	1.034	0.149
	Boys	1.60	0.863	0.150
I dance to the music	Girls	2.68	1.187	0.171
	Boys	2.06	1.170	0.203
I do musical activities every day	Girls	2.02	0.887	0.128
	Boys	1.54	0.665	0.115

The most form of musical activity that both boys and girls prefer to do during remote learning is listening to music ($M=3.45$, $SD=0.849$; $M=3.12$, $SD=0.892$), but the least one is playing any musical instruments ($M=1.68$, $SD=1.034$; $M=1.60$, $SD=0.863$). The study revealed that students who sing during remote learning also listening to music ($r=0.285$, $p<0.01$) and dance with musical accompaniment ($r=0.403$, $p<0.01$). The students are enrolled in music every day if they like folk music ($r = 0.313$, $p <0.01$), sing with their parents ($r = 0.344$, $p <0.01$) or attend musical events ($r = 0.386$, $p <0.01$).

Boys and girls prefer different musical activities. A study conducted by Ho found out that boys and girls often have a distinctive attitude towards learning music. Girls are more likely to interact with classical and popular music than boys (Ho, 2003). Listening to music as the most dominant type of musical activity is inherent in both boys and girls. Researchers from Israel figured out that the Covid-19 pandemic has not significantly impacted music listening habits, as most people still listen to music to adjust their mood (Ziv & Hollander-Shabtai, 2021). Listening to music is one of the most effective ways to regulate one's emotional state.

The third study scale identified the genres of music that students prefer while learning remotely. It was determined that there are no significant differences between the opinions of boys and girls about the

music genres they engaged in during remote learning. However, girls ($M=2.18$, $SD=1.084$) mostly like folk music, but boys ($M=1.93$, $SD=1.116$) prefer popular music (Table 3). It was figured out that children enjoy singing folk music in their native language ($r=0.233$, $p<0.01$), while they prefer to listen to folk music that is written in the official state language ($r=0.309$, $p<0.01$). If the students like folk music, they also like popular music ($r=0.378$, $p<0.01$), and parental engagements are more and more. There is a direct link between enjoying folk music and joint parent-child musical activities such as attending musical events ($r=0.329$, $p<0.01$), watching musical shows on TV ($r=0.351$, $p<0.01$) and listening to music ($r=0.296$, $p<0.01$).

Table 3

Music genres that students prefer during learning music remotely

Statements	Gender	M	SD	SE
I like folk music	Girls	2.18	1.084	0.156
	Boys	1.81	0.917	0.159
I like classical music	Girls	2.00	1.031	0.148
	Boys	1.66	0.889	0.154
I like popular music	Girls	1.87	1.044	0.150
	Boys	1.93	1.116	0.194

Which kind of music the students prefer is deeply determined by the music genres the teacher sings, plays and listens to together with children in the classroom. In primary school, music teachers use less popular music than classical and folk music. It is determined by the teacher's previous education and musical experience. These results are consistent with studies by several previous researchers, which indicate that the prospective music teachers primarily have the experience of playing and listening to classical music (Kruse, 2015), and their attitudes to popular music are defined by the musical experience of each teacher (Kim & Song, 2020). The researchers believe that popular music is more suitable for older students than younger students and is appropriate only in concrete classroom settings (Springer & Gooding, 2013). Furthermore, Han & Leung examined teachers' attitudes towards folk music and found that most are positive. The researchers think that the positive or negative attitude is closely associated with the personal musical preference of music teachers, their professional training, the responsibility of teaching and the labour market needs (Han & Leung, 2017).

The fourth scale determined the languages in which the students listened to music and sang songs. It was found that there is a significant difference in the views of girls and boys ($F = 12,339$, $p = 0.001$) about whether they like to sing songs in their mother tongue or prefer to sing songs written in the official state language. In general, the boys sing less than girls in both their mother tongue and the state language (Table 4).

Table 4

The language in which students listen to music and sing songs

Statements	Gender	M	SD	SE
I sing songs in my native language	Girls	3.62	0.703	0.101
	Boys	2.84	1.277	0.222
I sing songs in the state language	Girls	2.08	1.088	0.157
	Boys	1.75	1.118	0.194
I listen to music in my native language	Girls	3.68	0.624	0.090
	Boys	3.48	0.939	0.163
I listen to music in the state language	Girls	1.95	0.966	0.139
	Boys	1.81	1.130	0.196

On the one hand, those students who sing songs would sing in their mother tongue ($r = 0.342$, $p < 0.01$) and in the official state language ($r = 0.297$, $p < 0.01$), on the other hand, those who listen to music

prefer to do it in their native language ($r=0.354$, $p<0.01$). If the students enjoy dancing to music, they mostly choose music that is written in their mother tongue ($r=0.292$, $p<0.01$).

Conclusions

The first research question identified the parental engagement in students' musical activities as music lessons moved to remote learning due to the impact of the Covid-19 pandemic. Analysing the data obtained from the study, it is determined that parents often watch musical shows on TV and listen to music together with their children, but are rarely engaged in musical activities such as singing or playing a musical instrument. In daily life, the parents listen to popular music with their children more than other types of music and play a musical instrument together if the child has already learned the basics of playing the instrument.

The study concluded that the most dominant type of musical activity that boys and girls prefer to do independently during remote learning is listening to music. Both boys and girls spend little time playing any musical instruments. At the same time, it was found that there is a significant difference between boys and girls in the use of other types of musical activities. Girls sing and dance to the music independently more than boys. In general, the boys spend less time doing musical activities than girls.


The students use folks, classical and popular music while they learn music remotely. The study revealed that girls prefer folk music, while boys use more popular music genres. The study results indicate that the students like to sing songs in both native and official state languages. However, they prefer to listen to compositions and dancing to music that is written in their mother tongue rather than in their state language.

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Competitiveness of Universities in the Context of Sustainable Higher Education

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Abstract: At the end of the 20th century and the beginning of the 21st century, the humanity has entered a new stage of development when changes in various industries and spheres of human activity are not episodic, but obtain a lasting and continuous nature, so organisations, each individual of the society and the society as a whole must live with constant changes and be able to develop themselves in the interacting and constantly changing environment. Thus, the university teachers' competitiveness in an ever-changing environment is becoming topical in the context of sustainable higher education. The aim of the research: on the basis of the results of theoretical research, to develop a methodological base for studying the competitiveness of universities in the context of university sustainability. Theoretical research methods: study, analysis and evaluation of the content of scientific literature, and empirical research methods: reflection of the authors' experience, are used in the current research. There are various manifestation forms of competitiveness in the activities of universities. Aspirations of universities to ensure their viability, including competitiveness in the current changing conditions, as well as sustainability in the future perspective, greatly motivates university teachers to constantly improve professionally, thereby developing their competitiveness. There is a correlation between the competitiveness of the university and its teachers: the more competitive the university is, the more competitive its teachers are, and vice versa, the more competitive the university teachers are, the more competitive the university is as a whole.

Keywords: Competitiveness; sustainability of higher education; universities.

Introduction

At the end of the 20th century and the beginning of the 21st century, the humanity has entered a new stage of development when changes in various industries and spheres of human activity are not episodic, but obtain a lasting and continuous nature, so organisations, each individual of the society and the society as a whole must live with constant changes and be able to develop themselves in the interacting and constantly changing environment.

Such changing circumstances bring to life the finding that, for the purposes of ensuring the sustainability of education, universities and their teachers must not only be ready for sustainable changes in the environment of higher education, but also commence and implement such changes themselves (Hubers, 2020).

The meaning of educational changes that last is being re-conceptualised. Thus, the sustainability of higher education depends upon: 1) essential changes affecting the everyday practice of university teachers; 2) process of long-term changes of a cyclical nature, beginning when university teachers propose innovative ideas, and ending when the desirable results are achieved; 3) individual and organisational learning within the scope of universities, as well as changes in thinking, behaviour and conduct; 4) content of higher education and the conformity thereof to the future and present time dimensions; 5) human qualities in the personality of university teachers, as well as the competence to cooperate with new generations of students, understanding the specificity of such generations and how they differ from the older ones.

The sustainability of a university also depends on the scope of involvement of the university in ensuring and facilitating social and global sustainability (Sutz & Arocena, 2021).

Under such changing circumstances in the realm of higher education, the emphasis is also placed upon the development of competitiveness of universities, keeping in mind the competitive advantages (Abramo et al, 2016; Mahdi et al, 2019; Miotto et al, 2020), to promote the sustainability of higher education.

One of the competitive advantages of universities is the concentration of talented and competitive university teachers (Seginova et al, 2015).

The aim of the research: on the basis of the results of theoretical research, to develop a methodological base for studying the competitiveness of university teachers in the context of higher education sustainability.

Methodology

The research question of the study is as follows: What is a methodological base for studying the competitiveness of universities in the context of university sustainability?

The research was carried out in the field of concurentology which is an interdisciplinary direction of educational sciences. In the concurentology, two subgroups can be distinguished in which studies are conducted and the relevance of which is evidenced by recent years' publications:

- research on the competitiveness of a person as a personality or as a specialist (professional) (Alavredov & Alavredova, 2019; Chen & Cheng, 2019; Hohlova & Rivža, 2021; Reese et al, 2022; Simionescu et al, 2021; Tarasova & Shaimakova, 2020);
- research on the competitiveness of educational institutions as environmental systems and also as organizations (Bacci & Bertaccini, 2021; Garcia-Alvarez-Coque et al, 2021; Mahdi et al, 2019; Margolis, 2019; Miotto et al, 2020; Sutz & Arocena, 2021).

Research methods: 1) theoretical research methods: study, analysis and evaluation of the content of scientific literature; 2) empirical research methods: reflection of the authors' experience.

Results and Discussion

Nowadays, the globalisation process brings along versatile changes in the higher education environment, creating new challenges for both university teachers and students. The process of globalisation highlights the role of competitiveness of each country, relevant society and each individual thereof, inter alia, university teachers and also students as future specialists. Therewith, it is necessary to constantly enhance yourself in interacting with an ever-changing environment, developing yourself both as a personality and as a specialist-professional in your branch.

The impact of the globalisation process on the higher education environment has been emphasised in a number of scientific publications, with a special role being granted to the internationalisation of higher education (Adam, 2020; Aponte & Jordan, 2020; Hsieh, 2020; Shields, 2019). Therefore, the university administrative and academic staff must change their way of thinking. The majority of universities try to ensure their sustainability and also competitiveness by attracting foreign students, offering them an attractive study content and the process of studies itself, thus compensating the reduction in the number of local students. "Export" of higher education requires a high level of academic competence (including, competence in didactics of the higher education) from university teachers and professional competency in their field. Besides, in the context of connectivism theory (Aponte & Jordan, 2020; Martincova & Lukešová, 2015), not only does the digital competence and distance learning methodological competence of university teachers become increasingly topical, given that many study programmes are offered in the distance learning regime, but also media competence and social competence (especially, communication competence), multicultural competence, incl., foreign language competence of university teachers. Within the scope of multicultural competence, a special role is also to be granted to the knowledge of ethnic culture and mentality of students from other countries and attitudes - showing respect for diversity. This aspect must be specifically considered, when interacting with students during on-site classes. Cross-border education has become topical in the Latvian education environment, being a term with broad meaning. Cross-border education in higher education is implemented within the scope of different projects, rooted in cooperation between universities of different countries (Rauhvargers, 2008). Personal experience also shows that the interstate borders are gradually disappearing in the current higher education environment: 1) new international study programmes are created as a result of interuniversity cooperation; 2) university teacher and student exchange takes place within the scope of Erasmus + and other international cooperation agreements; 3) students from different countries are increasingly choosing study programmes offered by Latvian universities, as the Latvian higher

education environment becomes more and more open to international studies; 4) the distance learning/e-studies possibilities in the Latvian higher education are expanding, thus also attracting foreign students; 5) many foreign students wish to study in Latvia, by also getting acquainted with Latvian culture, including language; at the same time they have the need to communicate with university teachers in foreign languages they know, therefore it is important to respect the culture and diverse needs of foreign students studying in Latvia; 6) teachers from foreign universities more often show a willingness to work in Latvian universities; 7) the millennial generation start their student life in universities of Latvia. This sets new requirements for higher education.

At the same time, along with cooperation, many researchers emphasise the existence of competition and its relevance on the education environment, making universities seek new ways of promoting the development of their competitiveness and, therewith, also sustainability. It is also increasingly more often the case that the opinion is expressed that, in order to ensure a certain balance, along with the globalisation process, the glocalisation process must also be maintained and promoted, ensuring the observance of national interests of each country in economics, education, culture within the globalisation process, as well as in providing the sustainable development of the public at large (Hsieh, 2020; Lehnberg & Hicks, 2018).

The first main competition transformation in higher education is connected with the establishment of research universities. Growth of competition also implies the transformation of involved participants, as the universities and the heads of universities increasingly become more influential players in competing for the quality of higher education and status of the university. Competition among universities creates a multi-level competition environment on a global scale and transforms research universities into competitors, with one of the advantages of universities being the quality of conducted scientific studies, number of scientific discoveries and inventions, including the number of obtained patents, and publishing the referred to results in the global scientific environment. Competition in the higher education environment is not only related to the research and scientific activity of the university teachers. Competitiveness of a university has many different manifestations: ability to attract students, grants, patents, new study courses, state and private resources, reflection of scientific discoveries in the study content and the study process itself, etc. As the competition among research universities increasingly grows, this competition focus has shifted from the national level to the international or global level (Musselin, 2018). It is important for most universities to ensure prestige and a high-level rating among the universities, transforming from regional universities into competitive nationwide or international universities in the global higher education space. The main goal of modern universities, seeking to ensure a high level of quality of education (education content, process, education environment as a whole), is to ensure the availability of a diverse education environment not only for the citizens and permanent residents of the country, but also the residents of other countries, educating "global citizens". The studies conducted by the researchers of such universities address international issues, and not only local issues, and they are less dependent upon public funding and authorities, as they have managed to ensure other sources of funding (often from international projects and the tuition of foreign students).

A.A. Margolis (Margolis, 2019) accentuates the characteristic features of the most effective and competitive education systems on a global scale: 1) raising the attractiveness of the image of a teacher, including university teachers, allowing one to attract to the environment of schools and universities, competent university graduates - young professionals, engaging them in academic, educational and scientific activities; 2) high-quality pedagogical education, based on the best practice samples, recorded in the professional activities of teachers; 3) independent appraisal of general and professional competencies of secondary school graduates, future teachers, ensuring double selection: (a) teacher's profession is chosen by the most knowledgeable and apt applicants (school graduates); (b) the best professionally prepared, apt and competent university graduates start their pedagogic activity in education institutions after graduating from universities; 4) introductory mentoring programmes in the first year of work for young professionals, providing support, experience sharing and supervision on the part of competent, experienced teachers and concurrently also colleagues, fulfilling the duties of mentors; 5) support in solving professional problems; 6) effective professional development system, enabling one to eliminate the shortage of professionals, and problem-solving through constant methodological support, in cooperation with other teachers during the process of individual

professional development; 7) career growth opportunities and provision of work remuneration, ensuring progress towards high-quality educational activities, the support thereof and preserving high-level specialists in the field of education; 8) active involvement of teachers in the implementation of innovations and reforms, providing for versatile educational activities.

Sustainability of the national level education, including higher education, is one of the key prerequisites for the sustainable development of our society. In turn, one of the goals of higher education is to ensure the development of a competitive knowledge society, ensuring the promotion of development of competitiveness of young professionals, whose readiness to engage in independent, creative and responsible professional activities is one of the indicators of competitiveness (Katane & Īriste, 2013; Sohach & Plugina, 2015), highlighting the importance of the competitiveness of university teachers. Competitiveness of educators (including university teachers), in modern social sciences (including educational sciences) is one of the topicalities of research, as demonstrated by a number of scientific publications (Alavredov & Alavredova, 2019; Chen & Cheng, 2019; Donina & Sirova, 2018; Grebennikova & Rybkin, 2017; Tarasova & Shaimakova, 2020). The more competitive the university teachers are, the more competitive the university is as a whole, and vice versa. There is a correlation between competitiveness of university teachers and competitiveness of students as prospective specialists as well. Therewith, for the purposes of university teacher competitiveness, many universities set high requirements for university teachers, therefore promoting the development of their competitiveness.

Conclusions

- The socio-economic changes caused by globalization, internationalization and digitalization of higher education and demographic situation in Europe today, including also Latvia, update and make changes on the competitiveness of universities in the national and international higher education environment. One of the tasks of modern education is to ensure the sustainability, including balance of higher education in the ever-changing context of both globalization and glocalization.
- There are various manifestation forms of competitiveness in the activities of universities. The competitiveness of universities is largely manifested in their interaction with each other, including cooperation in the higher education environment on national and international levels. One of the manifestations of cooperation between universities is cross-border education. Competitiveness is also demonstrated by the development of the university as a research university, in the scientific research activities of its teachers and researchers, including international publicity of the conducted study results. The aspiration of regional universities to become nationwide universities, whereas national universities to become internationally recognized universities is another indicator of the competitiveness of universities.
- There is a number of factors that influence the sustainable development and competitiveness of universities in the higher education environment. Nowadays an important prerequisite for the competitiveness of universities is the competency of their teachers. Aspirations of universities to ensure their viability, including competitiveness in the current changing conditions, as well as sustainability in the future perspective, greatly motivates university teachers to constantly improve themselves professionally, thereby developing their competitiveness. There is a correlation between the competitiveness of the university and its teachers: the more competitive the university is, the more competitive its teachers are, and vice versa, the more competitive the university teachers are, the more competitive the university is as a whole.

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The Opinion of Pre-Service Teachers on the Online Course on Textiles

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Abstract: Distance learning became the predominant mode of education during the COVID-19 period. The purpose of the present study was to find out students' opinions about hands-on textile work during online learning in the basic textiles course, which is usually live. During the semester, they receive instructions for practical work through the online classroom. After completing the work, their work was evaluated. They were also asked to complete a survey expressing their opinions about online learning of practical work. 1st year Home Economics students participated in the study. The results showed that students took on this kind of work as a challenge. As they were limited in material, they had to show a certain amount of ingenuity and creativity. Half of the students was to recycle old clothes. The results indicate that practical work motivated students to learn new techniques and that the task was perceived as relaxing; they mentioned positive emotions during the activity, the desire to improve products with which they were not satisfied, independence. It was interesting that on average the textile products were made more carefully and precisely than the products of students in the previous year. A reason for this could be that students were not limited with time like they are in formal classes and probably spent their free time making the best possible product. The results indicate the important role of practical work in fostering creativity and motivation for the content of the course.

Keywords: distance learning, practical work, textile technique, pre-service teachers, creativity.

Introduction

Although learning textile techniques today is no longer essential for living (textiles are easily accessible), research shows an important role in terms of promoting psychological, cognitive, and motor development of the individual (Mason, 2005), expressing/maintaining cultural identity (Gale et al., 2002), and improving of well-being (Riley, 2008). Rönkkö and Lepistö (2011) found also that practical work and action-based learning encourages students to develop their problem-solving, participation, interaction, and decision-making skills. Textile techniques can also be the basis for designing a case study in which students link information related to economy (e.g., price, cost estimation) with knowledge of textile techniques (Montgomery, 2006).

There are several studies in literature that have researched the role of knitting. Melrose (2011) states that performing precise movements is related to the area of reading ability in the brain, and that rhythmic repetition of movements has a calming effect on the individual. Huchingsons (Huchingson et al., 1993) found that the calmness and concentration that occur in knitting also affect better divergent thinking. Eugene points out the connection with mathematical skills – especially in more complex patterns where proper planning, design of sketches, counting loops, rows is essential (Eugene, 2009).

Research also showed that knitting is often used in a variety of psychotherapeutic activities (to help control stress, fear, dementia) and that a successfully manufactured product also affects positive well-being and positive self-esteem (Corkhill et al., 2015).

McCaffery's (1993) survey on practical textile work showed that students felt accepted in practical work, were happy and cheerful, highlighted positive feelings, stressed awareness that the activity is useful and can be repeated at home, they had a sense of adulthood associated with a sense of self-confidence and success, as well as a sense of confidence, responsibility, and independence.

Owen-Jackson (2000, 27) claims that craft lessons should help learners to pursue the following goals:

- to evaluate products critically;
- to recognize opportunities;
- to improve systems or products;

- to be creative;
- to be organized;
- to gain a better understanding of materials;
- to use tools and equipment confidently;
- to make quality products.

Today, textile industry is facing several problems, one of them being the growing amount of textile waste (Fajt, 2014). This is why it has become extremely important that the individual also thinks about textile waste management. One of the possibilities of using surplus textiles is recycling. By recycling new, creative products can be created as well as following the idea of sustainability: *“Working educationally with the potentiality of waste materials thus open up for different ways of thinking about how the things are used and discarded and about the temporal aspects of sustainability.”* (Jørgensen, Madsen, Læssøe 2018, 811). Therefore, it is important that pre-service teachers gain as many ideas as possible during their studies on how to encourage or how to make a recycled textile product.

Distant learning

During the COVID-19 epidemic, distance learning became the predominant model of education from primary school to university. This type of education was made possible by information and communication technology (ICT), such as portals, forums, chat rooms, blogs, skype, e-mail, which enable the transfer of knowledge (Kranjc, 2008). With the help of ICT, a teacher can increase motivation in the classroom, monitor student activities, enable students to acquire knowledge (Ilomäki et al., 2007), and enable them to acquire digital competence (Rebernak, 2008). Digital competence refers to the meaningful use of technology for work, learning, and communication, which requires basic ICT skills (Juvan, 2016).

The Home Economics` Curriculum recommends that ICT should be included in all stages of household lessons in a meaningful way as to motivate, impart new knowledge and repeat/consolidate knowledge as well as check and assess knowledge. It proposes the introduction of ICT for the following activities (Gospodinjstvo Učni načrt, 2011, 27-28):

- presentations using various tools, such as an interactive whiteboard,
- use of various applications (educational games),
- programs that are didactically designed for home economics lessons,
- use of information and resources online,
- educational recordings online,
- e-materials (e-textbooks, didactic e-materials).

The Home Economics` Curriculum deals with topics in 4 modules (economics, textiles, living environment, and food and nutrition). Within the modules, a part of the content can be presented to pre-service teachers also in practical work. Through practical work, pre-service teachers get to know several textile techniques (spinning, felting, weaving, knitting, sewing, and fabric finishing techniques).

During the COVID-19 pandemic, teaching in physical classes was not possible. All tasks which include practical work were adapted to distance learning – demonstrations of practical work were carried out only through video lessons. The students were limited in their choice of appropriate textile material and worked individually.

The purpose of the present study was to find out students' opinions about hands-on textile work during online learning in the basic textiles course, which is usually live.

Methodology

With this investigation, authors were aimed to answer the following research question: RQ1: What is the students' opinion about online learning of practical textile topics?

Participants: 20 prospective teachers, 1 male and 19 female students from the Faculty of Education of the University of Ljubljana, majoring in Home Economics participated in the study. The main goal of

the Fundamentals of Textiles course (in addition to acquiring theoretical knowledge) is to develop practical skills and creativity.

Measures: For research purposes a survey was designed with open-ended questions, which was anonymous and voluntary. Students' responses were categorized and the following descriptive statistics calculated: absolute frequency and percentage share for each answer category. The results were presented in figures.

Procedure: Due to the COVID-19 epidemic, online learning was involved; students received instructions for making practical products weekly through online classroom on Moodle. They received written instructions and videos and had to photograph and submit their products. During the semester, they had to knit with their fingers without needles and with knitting needles; dye products with natural dyes (beetroot, onion peels, turmeric, chamomile); make a potato stamp and print on fabric; they even tried to sew (sewn picture, a pouch, a protective mask). The obligatory tasks were a pouch, a protective mask, a friendship bracelet; on their own volition, they could also make a toy and a pendant. At the end of the semester, authors analysed their submissions and asked them for optional feedback on the practical work they had been doing via distance learning. For this purpose, authors designed an open-ended survey, anonymous and voluntary. Their responses were classified and the following descriptive statistics were calculated: absolute frequency and percentage share for each answer category. The results were presented in figures.

Results and Discussion

As part of the sewing lessons, students learned about different stitches. To train accuracy and encourage creativity, they were given the task of creating a hand-sewn image. Although they could choose the motif by themselves, most of them decided to make a flower, which was also used in the tutorials. Thus, 13 students used as a flower as their basic motif, 2 students sewed an apple, and 3 students set on the heart. As far as original and new ideas go, one student used a picture of a bear with flowers and bees, and another one a roe and a heart.

The products were analysed in terms of the originality of the motif and the complexity of the stitches and sorted into three categories. In the first category (basic), authors included products with a simple plant motif and basic stitch. In the second category (upgrade), authors included images that included details of plants and insects and required more precision and sewing skills. The third category (original/new idea) included products in which students presented plants and animals in an original way (e.g., colour combinations, more demanding animal imagery) and products that included other motifs and were made with more demanding sewing skills. As can be seen in Figure 1, the largest share of products falls into the category of upgrades. The analysis also showed that students sought inspiration for their creations in the real world; no one chose to produce an abstract image.

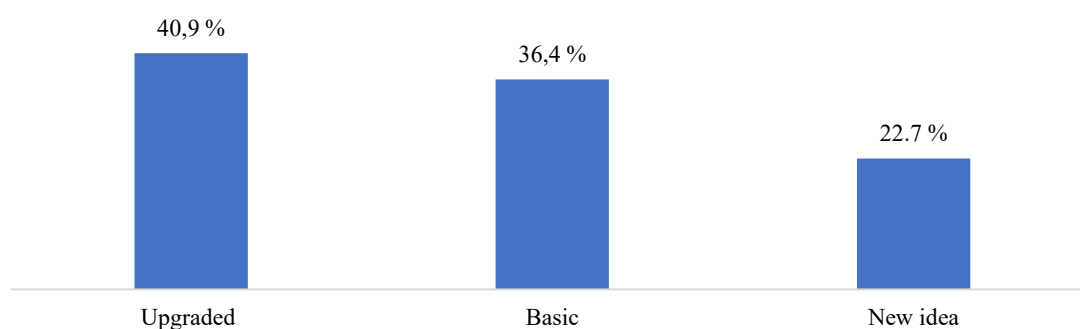


Figure 1. Categories of students' textile products.

The learning of basic textile techniques was followed by the production of different textile products (pouch, friendship bracelet, a protective mask, and so on). The first mandatory product was a pouch. All students made them in accordance with guidelines, 50 % of students also included various decorations on their own initiative (with stitches and buttons). They also made protective mask in line with video guidelines. One half of students sewed them by hand, one half on the sewing machine, which was also their own initiative. One of these students stated that the opportunity to try something

new was “*additional motivation*” (Student 3) and one stated: “*These textile tasks encouraged me to sew again, and my sewing machine was certainly happy with all this attention. Other products have also been created, such as a whole collection of masks and new clothes*” (Student 2).

The task of making a knit friendship bracelet also produced enthusiasm and encouraged the creativity of the students. Although the production of a simple bracelets was expected, the majority (60 %) opted to make bracelets that required slightly more skill. They also put effort into choosing colour combinations. Five female students also made an additional textile product – one made a pendant and four made toys. The results revealed that the students embraced the challenge of learning practical textile techniques at distance and that their textile products were better than those made by students who had to make the same products in a limited series of exercises at the Faculty. This suggests that the students probably sacrificed their free time to make textile products.

Authors also asked the students how challenging they found the tasks they had to complete. The majority of students (75.0 %) stated that practical activities were of appropriate difficulty, 15.0 % stated that the activities were demanding and two people claimed that the activities were not demanding. However, they all agreed that the tasks were a challenge for them.

When asked whether they experienced difficulties in their work, 80.0 % replied affirmatively. They pointed out problems related to knitting (2), the choice of materials (4) or a lack thereof (3), hand sewing (3), sewing with a sewing machine, no presence of a professor to help, lack of time.

The students were also asked to answer whether they liked the practical work they had to do in the online course and why. The results showed that they all liked the practical textile work they had to carry out during their distance learning. Authors categorized their explications and found that the dominant reason for their appreciation was to acquire new knowledge of textile techniques (Figure 2).

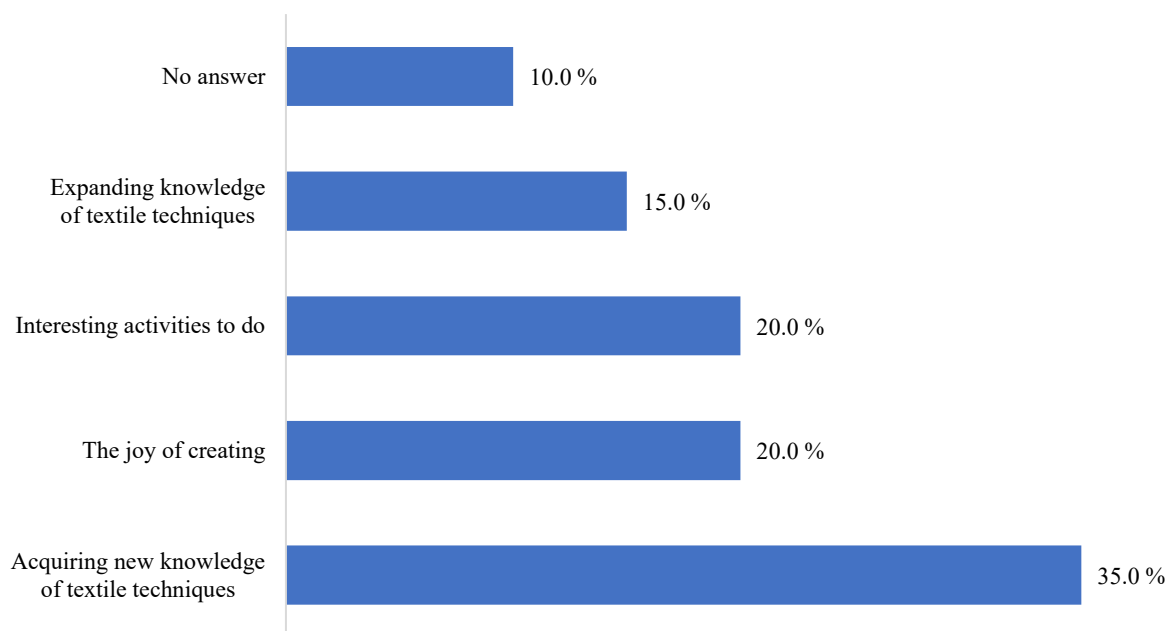


Figure 2. Reasons why students liked practical work.

For making textile products, the students had the possibility to use purchased material or to use old textiles that they no longer used (old T-shirts, pants, cloths, napkins). Results (Figure 3) show that more than half of the students chose material that was used (55 %).

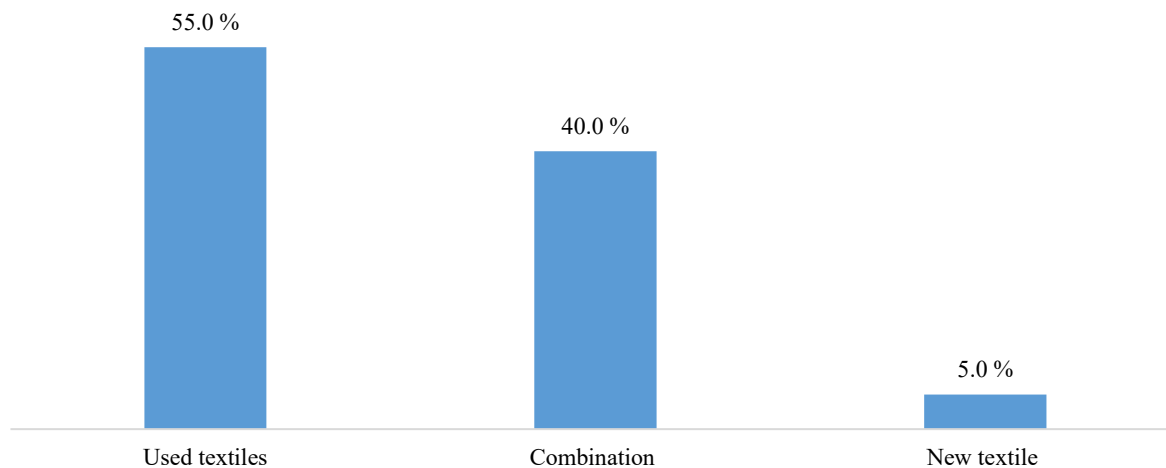


Figure 3. Materials used.

Students were creative not only in using textile but also in adapting all working processes:

“With some ingenuity, I somehow solved the problem, I replaced the accessories with similar ones (for example, instead of knitting needles I took Chinese sticks; instead of white elastic, I used hair elastic in the mask). Although the work took me quite some time, I still really enjoyed it. With the exercises, I renewed my knowledge from before, and I learned a lot of new things” (Student 3).

When students were asked what they had gained from the practical exercises, most responded that this was useful knowledge (12.0 %), one person was encouraged to revive his hobby, and one person discovered a new hobby. Among those who stated that they had gained useful knowledge, 25.0 % found valuable that they now know how to make a practical product (e.g. toy, recycled product):

“Manual work caused me a lot of problems at the beginning, because successful work requires concentration and, above all, patience. I liked knitting the most because it gave me a sense of success (the product is made quickly) and the process itself is relaxing. Because I have quite ‘clumsy’ fingers, I had problems with sewing, but when I sewed the mask and pouch, I discarded my handicrafts” (Student 6).

The literature emphasizes the importance of practical work for relaxation and wellbeing. Students were asked to provide information on how they felt during the practical activities. The results revealed that students mostly felt positive emotions (Figure 4).

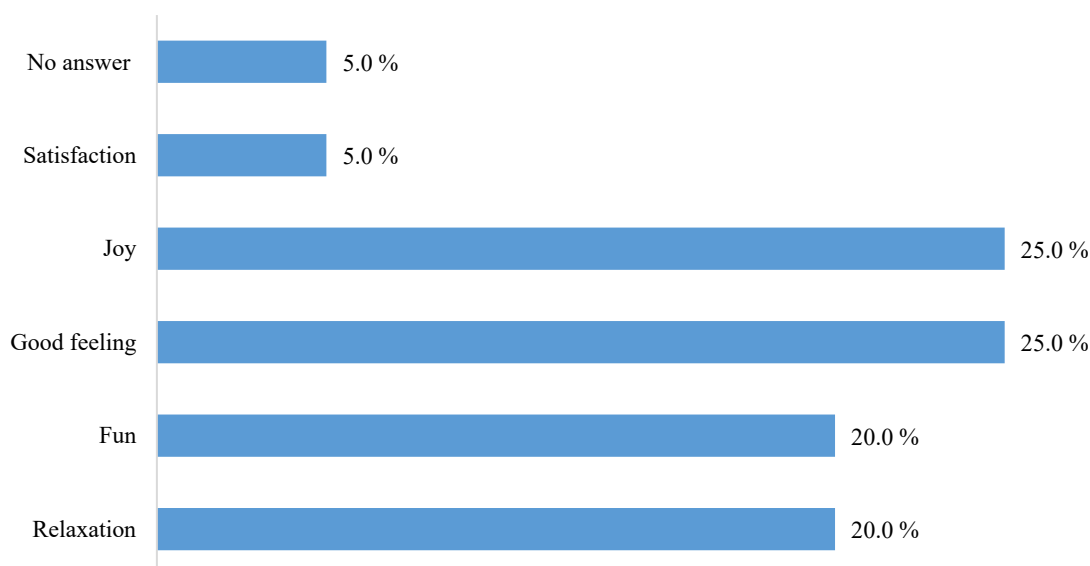


Figure 4. Students feeling during practical activities.

The students were also required to list the factors that allowed them to develop creativity. Most of the students (30.0 %) emphasized the possibility of freely decorating their products. Other answers included sewing (25.0 %), free choice of materials (10.0 %), finding solutions in the event of lack of materials for work (10.0 %) and the fact that it is necessary to make a useful product (15.0 %).

The answers to the open questions also showed that some students gladly accepted the challenge, as it allowed them to pursue their own hobby: *“With the large number of study commitments we have, I am running out of time for hobbies. Sewing, crocheting, and creating are one of them, so I was incredibly happy that I ‘had to’ take time for them”* (Student 1).

Schwartz (2009) states that the implementation of textile techniques enables the development of skills, work habits, perseverance, and precision. To perform more demanding tasks successfully may require more experimentation, effort, and (re-)thinking. During this process, students learn perseverance, self-control, and self-assessment (Korsak, 2013; Dray, 2010).

The results of our research show that during the study process students develop critical thinking and a desire to reproduce a product they believe to have failed: *“I think I did quite well, except for the sewn picture, when I do it again, I will spend more time on it”* (Student 4).

One student praised independence in distance learning.

“I liked working from home, because I have the opinion that if someone is forced to learn something on their own, they will learn it much better than if someone shows it to them and they just repeat it” (Student 5).

The research results suggest that giving the students opportunity to do crafts at their own pace has a positive effect on motivation to make good products.

Conclusions

At the time of the pandemic, the learning process was substantially adjusted. In the Fundamentals of Textiles course, which includes many practical activities, the question arose as to how students perceive adapted distance learning. The results showed that students embraced this kind of work as a challenge. Most of the students were motivated to work, wanting to make the best possible product, they also expressed the intention to make a product again (in case they were not satisfied with them). They also put in more effort than was required (e.g., sewing on a sewing machine). As most of the participants felt satisfied, they mostly expressed positive emotions. During the learning process, the majority of students opted for used textiles in making their practical products, which is important also from the perspective of learning sustainable behaviour. The results suggest that practical activities carried out in distance learning have a positive impact on student motivation to learn practical skills and sustainable behaviour.

The present study is limited by its small research sample. There is a need for further research on students' motivation to learn practical textile techniques/skills and the development of sustainable behaviour in distance learning.

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Competence development in adult and higher education

Psychological and Managerial Aspects of Music Teacher's Social-Emotional Competence

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Abstract: At the present stage of education development, new competencies are being put forward, which requires serious changes in teacher training. In the context of holistic and social constructivist approaches to the process of the development of students' creativity and self-expression across musical activity, music teacher's social-emotional competence has become especially relevant nowadays, which, in turn, puts forward the need to revise and strengthen the psychological and managerial aspects in the content of the training of a future music teacher. Objective of the study: psychological and managerial aspects of music teachers' social-emotional competence. Aim of the study: to investigate psychological and managerial aspects of music teacher's social-emotional competence in the content of music teacher training programs according to social and emotional goals in modern music education. Analysing European documents and scientific works of the last decades, as well as data from focus group (11 music teachers) discussions in which Latvian music teachers participated, the main results of the study are: a) social and emotional goals in modern music education; b) psychological and managerial aspects in competence profile of music teacher. Author concluded that due to global changes in society, philosophy and humanitarian sciences, the field of education needs to be transformed, including the content and process of teacher training. For creation of a positive and supportive emotional environment in the classroom, it is necessary to include music teachers' curriculum a) live musical communication; b) building an understanding about the value of music as cultural heritage of family, community and the nation as a whole; c) psychological and managerial basis in support of cooperation between teacher and students as equal partners in musical, research and other kinds of activity.

Keywords: music teachers' curriculum, social-emotional competence.

Introduction

The development of the social-emotional sphere of the personality has become more and more important in the rapidly changing society, which requires solving various problems, acting in stressful situations and achieving integrated goals. In the 21st century, specialists of different areas (Mortiboys, 2005; Wakeman, 2009; Vila, Gilar-Corbí & Pozo-Rico, 2021) recognize the need to actively develop social and emotional intelligence due to the increasing need to collaboratively analyse human behaviour and work to discover practical solutions to complex societal problems. In this context social and emotional skills, such as perseverance, empathy, mindfulness and leadership have become topical on the education policy agenda and in the public debate. In this context teacher's social-emotional competence is especially vital, because educators must work to promote human's growth in accordance with the basic democratic values, allowing students to express their feelings in the learning process (Strike, 2006).

According to R. Putnam (2002), for realizing and using common purposes, experiences, cultural norms, focused and constant efforts are needed to create a cohesive social capital through which we can share experiences, ideas and innovation and build mutual understanding among groups with diverse experiences and interests. Just training students with technical or academic skills is not enough to achieve success, communication and well-being, no matter how hard they strive.

Following the ideas and philosophical basis of D. Elliott's (1995), praxial music educational thoughts music education in comprehensive school includes playing and teaching musical instruments and reading music, as well as teaching the basics of music theory. Particularly important was the idea of pupils taking more active and responsible position in learning process. This meant that a teacher became more as an instructor for learning, motivating learners and providing inspiring learning environment (Van der Schyff, Schiavio & Elliot, 2016), where the student becomes an active subject

of the pedagogical process. The core idea of praxial music education is to create environment for pupils' expressing themselves and learning in music, giving carefully planned and suitable musical challenges to pupils. These challenges are processed in continuous students' interaction and reflection across musical activity (Saarelainen & Juvonen, 2017).

In connection with the foregoing, the following problems/questions have become topical in preparing music teachers:

- What problems do music teachers highlight in the context of social-emotional competence?
- What knowledge and skills do music teachers need in the social-emotional field?
- What kind of changes in music teacher preparing are necessary in the context of music teacher's social-emotional competence?

The study objective: psychological and managerial aspects of music teachers' social-emotional competencies.

The study aim: to investigate psychological and managerial aspects of music teacher's social-emotional competence in the content of music teacher training curriculum according to social and emotional goals in modern music education.

The core social-emotional competence of music teacher

According to the social constructivist approach, pedagogical process has to be oriented towards the construction of collaborative meaning, social interaction of all participants of teaching/learning (Oldfather & West, 1999). P. Eynde, E. De Corte and L. Verschaffel (2006) note that affective learning is inherently a social construction, because "*emotions are social in nature and situated in a specific socio-historical context*" (p. 195). They emphasize that emotions are socially situated because they are formed from cognitive interpretations of social experiences, constructed on cultural beliefs, serve as a comparative appraisal of social situations and events, and ultimately subject to the unstable effects of ongoing social developments.

Central to the concept of emotional intelligence is emotional awareness, which allows individuals to make accurate assessments about their strengths and limitations in relation to the world that surrounds them and informs an individual's sense of self-worth (Panju, 2008). Emotional awareness includes a) the ability to be self-aware by recognizing both the emotional patterns and emotional shifts in one's self, which is referred to as intrapersonal intelligence; b) the ability to be socially aware through the recognition of signs and patterns of emotional behaviours in others (Elksnin & Elksnin, 2003).

J. Moon (2004) discussed emotional intelligence in the context of learning and recognized the importance of many other factors in contributing to effectiveness that go beyond the traditional notions of pure cognitive ability (p.46). According to C. Wakeman (2009), the 'new' forms of assessment, student presentations, co-operative learning submissions, role play and the like, make huge demands on the student's emotional capacities, particularly in the areas of self-confidence, self-control and general emotional awareness (p.44).

For the successful formation and development of the above-mentioned competencies in music study process it is necessary:

- Teaching/learning process, which is based on a positive role model;
- Recognizing signs of student's emotional problems and teacher's skills to help him/her;
- Development of students' peer competence in interactions with peers: how pupil defines and solves the fundamental challenges of initiating and sustaining interactions with peers, resolving conflicts and building friendship with peers (Kemple, 2004).

According to holistic music education (Juvonen & Anttila, 2008), the main goals in music education are

- Developing knowledge and skills in music, self-concept, self-esteem, motivation and information processing skills;
- Regarding social requirements (like common values and atmosphere in learning environment);
- Connecting music to pupils' culture.

At creating a supportive, responsive and respectful environment during the music teacher training process today, focus should be on the following aspects:

- Musicianship and educator skills should be wide, stable, situational and flexible;
- Capability of placing learning in authentic practical situations, having knowledge of multiculturalism and managing to act artistically among these music cultures;
- Understanding of the student's point of view;
- Competence in music material and pedagogy on a level that can contribute to student's musical development;
- Formal educator skills can be learned verbally, but all the other dimensions of educator skills require learning in reflective action;
- Music educator skills require expert-level of both musicianship and educator skills;
- Achieving expert-level requires procedure of all aspects of musicianship and educator skills, which is possible only in reflective analysis and action in pedagogical situations;
- Musicianship and educator skills are interdependent, which forms music educators' professional competence (Saarelainen & Juvonen, 2017).

According to E. Bucura (2020), music educators have to find ways not only for learners' control and development of learning motivation, but also ways to demonstrate value for them in- and out-of-school musical life and experience, as well as relevance of deep reflection, self-directed and -determined learning.

Characterising the impact of a new approach to teaching and learning music T. Ernits (2020) stresses that group instrumental lessons create a favourable social learning environment for the children and contribute to the development of children at cognitive, affective and psychomotor levels. The research of T. Daugherty, Chr. Thompson, J. Papin, C. Chojnacki, Q. Gant and H. Netzer (2020) provides evidence consistent with the positive impact of using a projective story-telling task on the developing social cognition and skills, which help to remain engaged, constructively focused in flexible collaboration. Projective story stems have been reliably and validly used by J.L. Robinson (2007) with young children when cognitive limitations prevent the use of objective measures.

The CASEL Collaborating States Initiative Team in Pennsylvania elaborated five core competencies for promoting social-emotional learning (Sample Teaching Activities to Support the Core Competencies of Social and Emotional Learning, 2017):

- *Self-awareness* (the ability to recognize one's own feelings, thoughts and values and how they influence behaviours, assess one's interests, strengths and limitations, as well as possess a well-grounded sense of confidence, optimism and 'growth mind-set') includes identifying emotions, accurate self-perception, recognising strengths, self-confidence and self-efficacy.
- *Social awareness* (the ability to take the perspective of and empathise with others, including those from diverse backgrounds and cultures, as well as to understand social and ethical norms for behaviour and to recognise family, school and community resources and supports) includes perspective taking, empathy, appreciating diversity and respect for others.
- *Responsible decision-making* (the ability to make constructive choices about personal behaviour and social interactions based on ethical standards, safety concerns, and social norms, as well as the realistic evaluation of consequences of various actions, and a consideration of well-being of oneself and others) includes identifying problems, analysing situations, solving problems, evaluating, reflecting and ethical responsibility.
- *Self-management* (the ability to successfully regulate one's emotions, cognitions, and behaviours in different situations, effectively managing stress, controlling impulses, and motivating oneself, as well as to set and achieve personal and educational goals) includes impulse control, stress management, self-discipline, self-motivation, goal setting and organisational skills.
- *Relationship skills* (the ability to establish and maintain healthy and rewarding relationships with diverse individual and groups, communicate clearly, listen well, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively, and seek and offer help when needed) includes communication, social engagement, relationship building and teamwork.

These tasks need serious targeted training of music teachers, in which, in addition to musical and pedagogical aspects, psychological and managerial competencies are especially important.

Summarizing the above, it must be concluded that due to global changes in society, philosophy and humanitarian sciences, the field of education needs to be transformed, including the content and process of teacher training. Transformation must begin with changes in the social and emotional spheres: therefore, the issues of human creativity and the development of the emotional sphere are especially relevant.

Methodology

Focus group discussions (FDG) were undertaken for the aim to answer three study questions:

- What problems do music teachers highlight in the context of social-emotional competence?
- What knowledge and skills do music teachers need in the social-emotional field?
- What kind of changes in music teacher training are necessary in the context of teacher's social- emotional competence?

Four focus group discussions (FDG) were conducted with Latvian music teachers to explore their views and they were held at Daugavpils University on 03 - 24 February 2020. As a tool for analysing the data of FDG, keywords-in-context analysis was used. Due to the results revealing personal experiences, the results cannot be generalized.

Participants: The targeting group was selected as a discretionary sample. The idea was to find music teachers who know as much as possible about the purpose of the study and have extensive experience in this field.

11 music teachers (9 women and 2 men) participated at the focus group discussions: four primary school music teachers work in classes 1-4 and seven – in classes 5-9. Their ages ranged from 28 to 61 years, and six from 11 participants had worked as music teachers from 22 to 31 years (in this case they are experts in music education field).

Data collection: An invitation to the FGD was sent to participants; the research was shortly introduced in the invitation. The FGDs lasted between 50-80 minutes. During four meetings, the moderators (author and expert in the music education field with researcher's experience), first facilitated a general discussion with participants. For discussion purposes, disclosure items were grouped in the following keywords (categories):

- Knowledge and skills of music teacher in the social-emotional field;
- Primary school students' characteristics in the social-emotional context;
- Students' problems in the social-emotional sphere;
- Psychological and managerial aspects of social-emotional competence of music teacher;
- Concrete pedagogical situation in the social-emotional context;
- Music teachers' problems in the social-emotional sphere;
- Necessary changes in music teacher preparing in the context of teachers' social- emotional competence.

The discussions were audio recorded to ensure accuracy in preparing the notes for analysis. Members of the focus group team analysed notes to identify themes and then summarized them for the report. The data was then transcribed to 62 pages of text.

The analysis of the data: Analysing the data in the frames of the constant comparative strategy, we used the following criteria:

- Frequency (How often was a concept mentioned?);
- Extensiveness (How many different people mentioned the concept?);
- Intensity (How much passion or force was behind the comments?);
- Specificity (How much of detail was provided by respondents?);
- Internal consistency (Did individual participants remain consistent in their views?);
- Participants' perception of importance (Did participants cite this as an important concept?) (Analyzing Focus Group Results, 2015).

Due to the fact that in this study the focus group method was chosen to discuss music teachers' ideas, opinions and thoughts about psychological and managerial aspects of music teacher's social-emotional competence, the author used qualitative data analysis, which is, according to S. Wilkinson (2004), traditional way for focus group research.

Speaking about the analytical techniques that allow to FGD data in this study, keywords-in-context analysis was used (Leech & Onwuegbuzie, 2007; Onwuegbuzie, Dickinson, Leech & Zoran, 2009). The purpose of keywords-in-context is to determine how words are used in the context with other words. According to Fielding and Lee (1998), the contexts within words are especially important in focus groups because of the interactive nature of focus groups: keywords-in-context involve a contextualization of words that are considered central to the development of themes and theory by analysing words that appear before and after each keyword, leading to an analysis of the culture of the use of the word.

Using keywords-in-context analysis, the knowledge of music teachers about these issues is elucidated: their importance in judgments, which opens up new ways of thinking according to the above categories.

Reliability and validity: Reliability and validity are associated with the objectivity of information, which means the researcher's interest in the discussion, his/her ability to understand and sincerely hear what the participants say. The research is a) reliable because it is built on the experiences which the music teachers have told about in FGD, b) valid because it has examined the issues it is directed to. The validity is also confirmed by the FGD as a research method and the choice of participants who are experts in music education.

Results

The data of this study update the music teacher's reflective analysis of music teaching/learning situations, which is in line with the study results of J. Saarelainen and A. Juvonen (2017) as well as E. Bucura (2020).

In the context of the social and emotional goals of music education, especially essential are psychological and managerial aspects in music teacher's competence profile: participants of FGD noted that music teacher's knowledge and skills at developing pupils' self-esteem, self-confidence, enjoyment, mutual understanding and support in group music learning process are required to be on a very high level. As to the psychological aspect in competence profile, music teacher needs a high level of emotional intelligence, reflective activity, musical thinking, and creative activity including improvisation in a wide context (pedagogical and musical improvisation).

The managerial aspect in music teacher's competence profile has to include the organisational competence: he/she needs to organise pupils' individual and group creative musical activity, projects and socially significant events, self-development, cooperation in research activity.

Analysing the data of FGD, this study has brought to the foreground changes in music teacher's training in the context of music teacher's social-emotional competence. Participants of FGD identified the following psychological aspects which need to be included in music teachers' study programs:

- Social and emotional skills, which predict students' cognitive, educational and social outcomes in the music study process, as well as their general well-being (for example, How malleable are social and emotional skills and how do they differ across children of different ages? What are the social and emotional skill gaps according to children's gender and socio-economic background, and what are their likely causes? How have these skills been affected by a combined influence of biological and environmental factors, life events, and changes in self-perception? Can systematic interventions change the social skills of students in desired directions?);
- Family musical culture and traditions in a multicultural context (for example, parental musical priorities, as well as possibility to predict children's social and emotional development across different kinds of musical activity);
- Building an understanding about the value of music as cultural heritage of family, community and the nation as a whole;

- Psychological basis in support of cooperation between teacher and students as equal partners in musical, research and other kinds of activity;
- Psychological basis of learning (for example, students' learning styles, age peculiarities and technologies in music study process; students' characteristics in the social-emotional context);
- Creation of a positive and supportive emotional environment;
- Live musical communication, i.e. students' active social and emotional participation in communities' cultural events (not only as listeners, but active participants in organizing these events);
- Development of music teacher's reflective activity as an important tool of teacher's competence (for example, concrete pedagogical situation in the social-emotional context; analysis of music teacher's problems in the social-emotional sphere).

In the opinion of FGD participants, managerial knowledge and skills of music teachers should be wide, stable, situational and flexible, which means that a teacher needs to

- establish and work toward the achievement of positive and realistic goals;
- analyse how current decisions may impact goal achievement;
- teach students to identify what is known about a lesson topic or objective and to identify what they need to know to understand the lesson objective, then how to set a goal to achieve that learning;
- help students recognize responsible social media use;
- have discussions about positive, age-appropriate ways we can express our feelings (e.g., put our feelings into words, draw a picture or write about how we feel, create an art or media project, show our feelings through dance), as well as how to use their awareness of emotions to guide decision-making;
- help students think through and suggest alternatives when students encounter challenges;
- persevere by expending additional effort, extending timeframes, identifying alternative paths to goal achievement, and/or seeking help from others;
- hold a discussion in which the teacher asks questions that encourage students to reflect on barriers they may encounter and that also help them think about ways they can overcome them.

Conclusions

Music teacher today must be essentially a multiply skilled person in the wide field of music, not just a one-direction professional. Versatile music skills, pedagogic know-how and social-emotional competence assure the educability and help to manage in the music teacher's profession. Along with the main (classic) goals members of the focus group set the following goals in the social-emotional field of music teachers:

- Cooperation across the participation in group musical activity;
- Building a positive attitude;
- Developing musical, psychological, pedagogical and managerial skills through joint practice, participation in goal setting and evaluation for learning in music;
- Entrepreneurship and participation.

The above goals represent wider educational ideals about what kind of music teacher competencies are needed for the society of the future, and are aimed at achieving different categories (aspects) of curriculum, in which students' creativity and developing self-expression are the core of musical activity:

- Creation of psychological conditions for freedom and a wide range of students' musical expression in music learning process;
- Taking into account the interest of students' group in choosing a musical repertoire in accordance with their cultural values;
- Building an understanding about the value of music as cultural heritage of a nation;
- Using music technology in composing and expressing creative musical ideas, as well as a variety of different music styles and genres in a collective music making;
- Focusing on making music as a member of a group;

- Self-expression in music and movement in collective music making;
- Using improvisation in compositions, movement, instrumental and vocal performances;
- Using music in different social context.

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Evaluation and Students' Self-assessment of Transversal Skills in Secondary School Mathematics. Case Study in Latvia

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Abstract: To provide qualitative and sustainable education school reforms are taking place in many countries around the world. The transition to competence-based learning also alters expectations for learning outcomes. To ensure student-centred learning, it is necessary to equip them with transversal skills required to: address subject content challenges, use different teaching and learning methods; address everyday life problems. The aim of the study is to assess students' transversal skills in secondary school mathematics. There were 50 participants in the study, who were all studying mathematics at an in-depth level. Transversal skills were measured in action with a test as well as with student self-assessment. While test results showed that students excel in interpretation skills, collaboration skills and digital skills, analyzation skills tested at high levels in students' self-assessment. There is no strong correlation between student self-assessment and student performance evaluated by test. Consequently, it can be concluded that the overall development of transversal skills in secondary school mathematics are sufficient, but it is necessary to understand the inconsistency between self-assessment and performance evaluated by test so that the factors affecting the development of transversal skills can be further analysed.

Keywords: Transversal skills, secondary school, mathematics, transferable skills

Introduction

The UN (United Nations) Sustainable Development Goals for 2030 aims to provide inclusive and qualitative education and to promote lifelong learning opportunities (United Nations, 2015). In this way, one of the priorities is to identify a safe learning environment where equal and respectful individuals may develop their potential (United Nations, 2015). The future is uncertain, and it is difficult to predict what kind of knowledge and which skills will be needed for life (OECD, 2018), leading to lifelong learning (Ananiadou & Claro, 2009; OECD, 2018; UNESCO, 2016) and life-wide (UNESCO, 2016) as learning priorities. The learning of different learning strategies is of particular importance at an early stage in secondary education (Ananiadou & Claro, 2009). Education should not only prepare young people for work but also encourage the development of the students need to become active and responsible citizens (OECD, 2018; Council of Europe, 2018). To ensure attainment of educational objectives, the development of transversal skills has been identified as a key component of learning. The European Commission has identified eight key skills needed for lifelong learning (European Commission, 2019). UNESCO puts forward transversal skills for the implementation of the UN Sustainable Development Goals, identifying the importance of transversal skills for both life-long learning and emphasizing their role in achieving success in the academic environment and workplaces (Care & Luo, 2016; Care, Vista, & Kim, 2019). On the other hand, the taxonomy of skills developed by Binkley highlights the 21st century skills, which provides everyone's readiness for rapid change and is required to address the challenges of this century (Binkley et al, 2010), by setting out four broad skill groups. Looking at the importance of transversal skills in the context of Latvia, the Skola 2030 (*School 2030*) launched a review in 2018 of learning curriculums in all classes and in all subjects. A changed learning approach, as well as a learning content, highlights the role of transversal skills, adequately describing the need for modern society to live in a world that is constantly changing, thereby also making it necessary for students to change and adapt to the economic, political, social and cultural variability (School 2030, 2018), by highlighting the transversal skills as a tool to overcome these challenges.

The transversal skills identified in the various studies represent the overall trend in society's variability and set out the development of specific transversal skills as the learning objectives to be achieved, but a major problem remains: the promotion of development of transversal skills. Gordon refers to a number of ways of integrating transversal skills into the learning process: in a specific subject

(specific subject approach), including in the curriculum as a separate subject with specific objectives and formal means of training for the development of skills; integrated into all traditional subjects (cross-subject approach), in extra-Curricular activities (extra-Curricular approach) (Gordon, etc., 2009).

In Latvia, like many other countries around the world, a learning model has chosen to implement transversal skills in all traditional subjects (School 2030, 2018), but transversal skills in scientific literature have not been analysed from the perspective of a specific subject. Therefore, it is significant to understanding each subjects' objectives and content suitability for the development of specific transversal skills, in order to develop the appropriate transversal skills and to successfully integrate them into the learning content.

Transversal skills are skills that go beyond a specific area or curriculum. They have interdisciplinary characteristics (Flora, 2014). Transversal skills are the specific skills needed to be prepared for the challenges of life and work of the 21st century (Moto, Ratanaolarn, Tuntiwongwanich, & Pimco, 2018) and needed to be able to tackle global challenges (Irwanto, Saputro, Rohaeti, & Prodjosantoso, 2018) as well as promoting students' inclusion in the self-regulated learning process (Lāma, 2021).

However, it should be acknowledged that it is not possible to separate learning structure and subject content from development opportunities to develop transversal skills as they are closely connected. This points to the need to redefine transversal skills specifically in secondary school mathematics. In the analysis of the various math programmes, Lāma offers to define transversal skills in math from the perspective set out in the curriculum, bearing in mind the challenges posed by modern life and dividing them into three broad groups (Lāma & Andersone, 2021):

1. Transversal skills required to address secondary school mathematical challenges
2. Transversal skills required for the use of different teaching methods
3. Transversal skills needed for everyday life

The study is designed as a pilot study aimed at identifying the development of students' transversal skills in secondary school mathematics for students that study mathematics at an in-depth level and to find out the difference between students transversal skills demonstrated in action and student self-assessment.

Methodology

50 students participated in the study: 25 students of 11th grade, 25 students of 12th grade. Secondary education in Latvia is 3 years (grades 10, 11 and 12). All participants in the study are studying math at an in-depth level.

The transversal skills of secondary school students in mathematics were assessed:

1. in action with an established set of mathematics tasks for which the students were given 80 minutes to complete (test);
2. student self-assessment (self-evaluation survey).

The Transversal skills of secondary school students in mathematics were defined with nine most important transversal skills, which were divided into three broad groups:

1. Transversal skills required to address secondary school mathematical challenges
 - analyzation skills (2 criteria),
 - interpretation skills (2 criteria),
 - decision-making skills (2 criteria),
2. Transversal skills required for the use of different teaching methods
 - collaboration skills (2 criteria),
 - communication skills (2 criteria),
 - planning skills (2 criteria),
3. Transversal skills needed for everyday life

- creativity (2 criteria),
- problem solving skills (2 criteria),
- digital skills (3 criteria).

The self-assessment questionnaire consisted of 19 questions, while the test consisted of 6 different type of composite tasks. Students self-assessed their transversal skills on the 4-point Likert scale (1- poor, 2- fair, 3- good, 4- excellent). The assessment of students' transversal skills in action with test was measured using the same criteria and the score was converted to the corresponding levels (poor <16% of total points; fair 17%-50% of total points; good 51%-83% of total points; excellent 84%-100% of total points). The value of each transversal skill consists of the mean value of the corresponding criteria rounded to two decimal places. In the study Cronbach alpha was calculated to measure internal consistency of the Likert scale, the mean values of students' transversal skills, the relative distribution of students' skills across levels, as well as a Spearman rank correlation between the self-assessment of students' transversal skills and the results achieved in action in the test. IBM SPSS Statistics Version 27 and Python 3.8 were used for data processing and analysis.

Results and Discussion

In order to determine the internal consistency of the Likert scale, a Cronbach alpha coefficient was calculated.

Consistency of the Likert scale (19 parameters) corresponds to high or very high reliability:

- secondary school students' self-assessment of transversal skills (student survey). $\alpha = 0.800$;
- secondary school students' transversal skills evaluation in action (test), $\alpha = 0.837$

By analysing students' test results of transversal skills required to address secondary school mathematical challenges, one can conclude, that students have well developed interpretation and analyzation skills (Figure 1). Specifically, interpretation skills should be highlighted as 74% of students achieved excellent result in the test. This indicates the ability of students to see phenomena in a wider context. The relationship between interpretation skills and analyzation skills which are also well developed among participants (excellent 40%) also points to the consistency of the results.

Far worse results students have achieved in decision making. Only 12% of participants demonstrated excellent decision-making skills, and 60% achieved good level. However, in general, the results are very high, which could be due to the fact that students in classes have chosen to learn mathematics at an in-depth level.

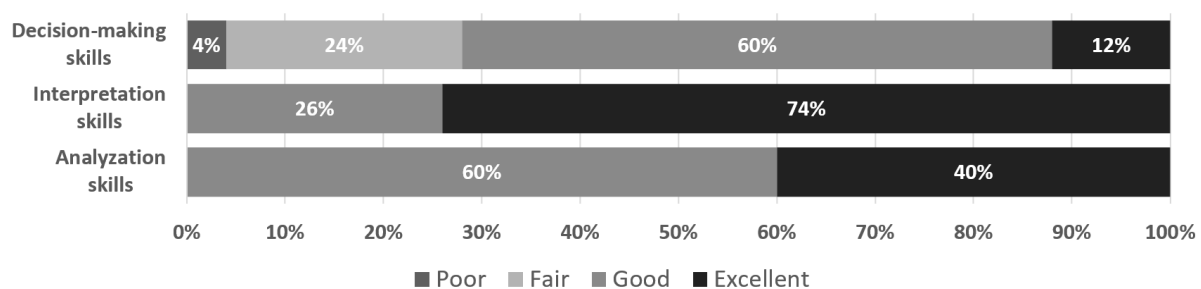


Figure 1. Transversal skills required to address secondary school mathematical challenges. Student level based on test scores.

Comparing the results of the students test and self-assessment some similarities can be seen (Figure 2). Students have highly evaluated their analyzation skills (excellent 28%, good 44%) and interpretation skills (excellent 70%, good 26%) and slightly lower decision-making skills (excellent 20%, good 68%).

However, students in self-assessment, as opposed to the results reported in the test, have evaluated analyzation skills as most developed among transversal skills required to address secondary school mathematical challenges. This could be due to the fact that analyzation and interpretation skills are closely linked, and, therefore, students often face difficulties to distinguish them.

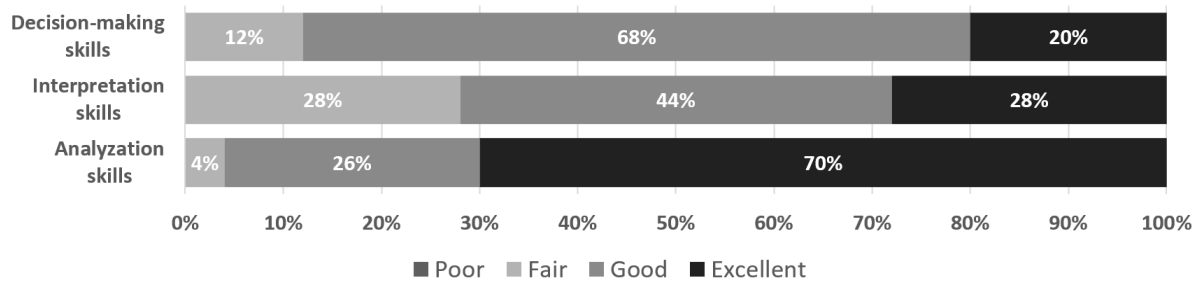


Figure 2. Transversal skills required to address secondary school mathematical challenges. Student self-assessment

By analysing test results of transversal skills required for the use of different teaching methods (Figure 3) it may be concluded, that most of the students have excellent collaboration skills as 74% of participants has achieved excellent score and 24% good score. Communication skills (excellent 22%, good 54%) and planning skills (excellent 28%, good 68%) has also been well developed. Results point to the fact that participants are accustomed to working with different learning methods and to planning their own work. The global pandemic might have played a role in the development of planning skills. Students had to be responsible for planning their learning process as well as collaborate and communicate between themselves, and also with teachers. Further research is necessary to investigate this assumption.

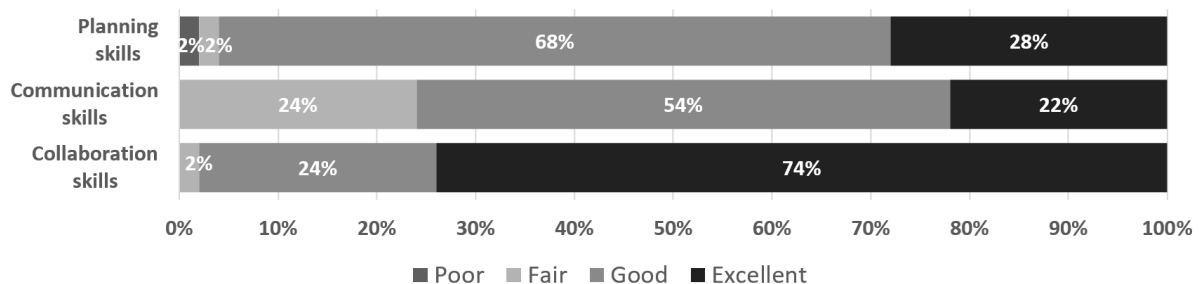


Figure 3. Transversal skills required for the use of different teaching methods. Student level based on test scores.

When comparing the results of student's transversal skills required for the use of different teaching methods evaluated by test and self-assessment, it can be concluded that communication skills and planning skills have been assessed similarly (Figure 4). However, students have self-evaluated collaboration skills lower than they have actually achieved in test. In comparison, in test 74% have reached excellent level but only 36% of students has self-assessed their skills as excellent. This could be linked to past experience where collaboration might have failed. Collaboration, if it is not well structured, can create difficulties for students. Further studies are needed to confirm the hypothesis.

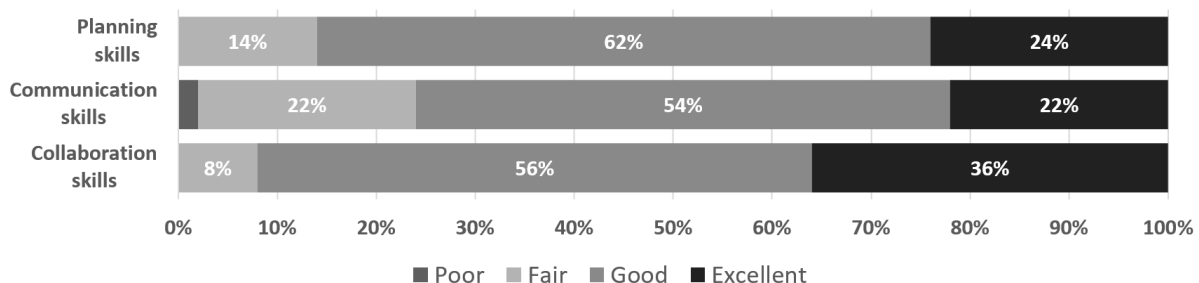


Figure 4. Transversal skills required for the use of different teaching methods. Student self-assessment

By analysing test results of transversal skills needed for everyday life, one can conclude, that students have very high digital skills as 84% achieved excellent result (Figure 5). Problem solving (22% excellent, 48% good) and creativity (26% excellent, 52% good) has been developed similarly. Problem solving in some degree includes creativity in particular dealing with everyday problems. Some students have even achieved lowest possible level (poor 2%).

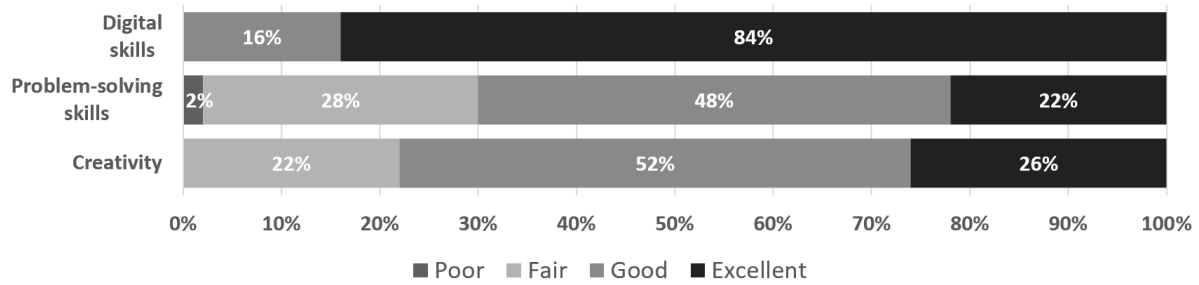


Figure 5. Transversal skills needed for everyday life. Student level based on test scores.

When comparing the results of student's transversal skills required for everyday life evaluated by test and self-assessment, it can be concluded that problem-solving skills and creativity have been evaluated similarly (Figure 6), but there is considerable difference between students' digital skill self-assessment and achieved results in the test. Only 10% of students have self-assessed their digital skills as excellent, but 84% of them has achieved excellent score in test. This could be due to the fact that pupils have previously carried out significantly more difficult tasks in the learning process.

As one of the factors that might be associated with the low evaluation is the relatively rare use of digital technologies in their lessons. In mathematic lessons digital technologies are usually used for highly sophisticated modelling and are rarely associated with skills required for searching and evaluating information, which forms the basis for digital skills in the context of the study. However, the reasons for the low self-assessment of pupils' digital skills should be examined in further studies, by examining the use of digital skills of students in day-to-day activities.

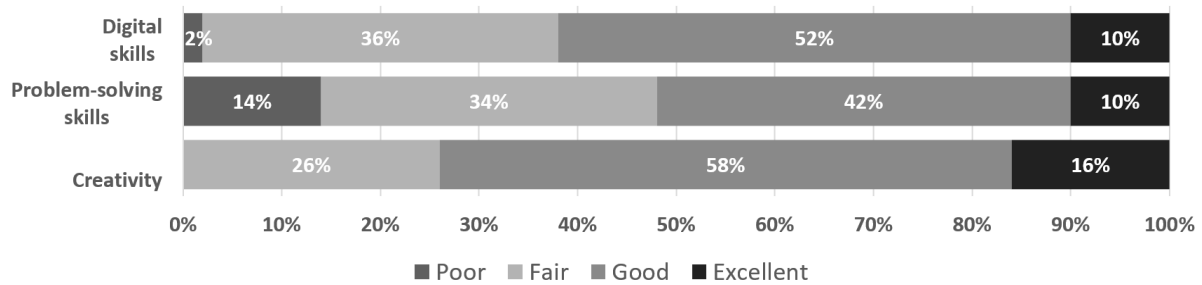


Figure 6. Transversal skills needed for everyday life. Student self-assessment

By analysing students' transversal skill mean values and standard deviation, it can be concluded that students have developed interpretation skills (mean 3.61, SD 0,43), collaboration skills (mean 3.63, SD 0,41) and digital skills (mean 3.79, SD 0,24) better than other skills (measured by test). This could be due to the fact that the learning process is changing in line with everyday life necessities. By comparing the mean values achieved by students in the test with their self-assessment, it can be concluded that digital skills have been assessed very differently.

The lowest score in test students achieved in decision-making (mean 2.61 SD 0.67). And it should be highlighted that data is quite polarised. Results are in line with previous study that shows that decision making skills are skills that have not been well developed among secondary school students (Lāma, 2020). Further studies would be necessary to explore why the students have failed to develop their decision-making skills and how to improve them.

Table 2

Mean value, standard deviation and spearman rank correlation of students' transversal skills

Transversal skills	Student evaluation with test		Student self-assessment		Spearman rank correlation
	Mean	St.Dev.	Mean	St.Dev.	
Transversal skills required to address secondary school mathematical challenges					
Analzyation skills	3.31	0.32	3.38	0.49	0.39

Transversal skills	Student evaluation with test		Student self-assessment		Spearman rank correlation
	Mean	St.Dev.	Mean	St.Dev.	
Interpretation skills	3.61	0.43	2.76	0.69	0.35
Decision-making skills	2.61	0.67	2.80	0.57	0.28
Transversal skills required for the use of different teaching methods					
Collaboration skills	3.63	0.41	3.07	0.59	0.04
Communication skills	2.98	0.64	2.71	0.73	0.28
Planning skills	3.21	0.52	2.82	0.58	0.25
Transversal skills needed for everyday life					
Creativity	2.94	0.72	2.65	0.66	0.27
Problem-solving skills	2.91	0.70	2.20	0.73	0.31
Digital skills	3.79	0.24	2.62	0.63	-0.09

Spearman rank correlation between each skill measured by test and by students themselves was identified to determine, whether students were able to assess their transversal skills objectively.

None of the measured transversal skills had strong correlation between skill measured by test and student self-assessment. There is moderate correlation between test results and students' self-assessment for analyzation skills ($r = 0.39$, $p = 0.05$), interpretation skills ($r = 0.35$, $p = 0.01$), problem-solving skills ($r = 0.31$, $p = 0.03$). This points to the limitations of the student's self-assessment results. However, the interpretation of the results should consider a number of influential factors. The most important thing is to mention the high mathematical preparedness of students, which allowed students to cope relatively easily with mathematical tasks, which are also intended for students without specialized and advanced mathematical knowledge and skills. When discussing the results with students and trying to find out what factors students had considered when selecting the relevant assessment, students stressed that the longer period of time was taken in account when assessing their transversal skills and that the assessment is not based solely on the tasks offered in the test. Another factor that influenced students' self-assessment was the frequency of the use of skills in their previous learning process, which not only allowed the development of skills, but was taken into account in the student self-assessment as a factor of the quality of transversal skill. Further studies are needed to identify the extent to which students' self-assessment reflects the actual state of their transversal skills.

Conclusions

To ensure sustainable and high-quality education, it is essential to provide students with transversal skills that enable them to learn and to continue their learning throughout their lives on their own. The analysis of 50 students' skills measured in action with test and the self-assessment of students' transversal skills leads to some important conclusions:

- Students have achieved very high results in test for skills such as: interpretation skills (excellent 74%), collaboration skills (excellent 74%), digital skills (excellent 84%). These are essential skills that allow students to successfully participate not only in mathematic lessons but also in today's difficult circumstances. However, students decision-making skill results are lowest (excellent-12%), but still should be considered as good.
- Students self-assessed their analyzation skills (excellent 70%) higher than all other transversal skills, while they have assessed their digital skills relatively low (excellent 10% and mean 2.62). This indicates the need for further studies to find out why there is such a difference between the students' self-assessment and achieved results in test.
- There is no strong correlation between student self-assessment and achieved results in a test for any of the measured transversal skills. There is moderate correlation between analyzation skills ($r = 0.39$, $p = 0.05$), interpretation skills ($r = 0.35$, $p = 0.01$), problem-solving skills ($r = 0.31$, $p = 0.03$). Consequently, further studies are needed to explain the reasons for low correlation.

Students' transversal skills in secondary school mathematics may be considered good, but it is important to understand how they can be further developed, particularly by highlighting skills in which students' performance is lower. The ability of students to objectively assess their skills, which forms the basis for the self-directed or self-regulated learning process, is also essential. It is, therefore, necessary to clarify the teaching and learning methods and the activities which help to improve students transversal skills and the role of the subject content in the development of the student transversal skills in secondary school mathematics.

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Situation Simulation as a Pedagogical Method in Teacher Education

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Abstract: The idea of sustainable development has been identified as the overarching goal of the 21st century in various sectors of the Latvian economy, including education. This idea of sustainability encourages teacher education programs to look for new approaches and pedagogical ways to achieve learning outcomes, i.e., to ensure that graduates are effective implementers of sustainability ideas in their professional careers. Simulation-based education has been found to be an effective way to address these challenges in many countries. It offers students the opportunity to learn in a safe environment, as well as promotes self-efficacy in their professional activities. This article highlights ways in which simulations can strengthen teachers' professional skills in everyday and critical professional situations. The aim of this publication is to analyse the effectiveness of the situation simulation method in the context of teacher education. The methodology of the research consists of a set of qualitative data obtained by interviewing 37 graduates of the teacher education program, for whom situation simulation was used as one of the methods during their studies. The professional benefits identified in the interviews were mapped in relation to the planned learning outcomes and it was concluded that this method can be used both as a teaching method and as a tool for assessing professional skills. The study data were analysed using the qualitative data processing program NVivo 12.0. Within the framework of the research, the benefits for students both in the study process and in starting an independent professional activity were analysed and described.

Keywords: situation simulation, small teaching approach, reflexive approach, teacher education, NVIVO

Introduction

In order to implement the vision for education set out in the Guidelines for the Development of Education of the Ministry of Education and Science of the Republic of Latvia for 2021-2027 "Future Skills for the Future Society" and to address the challenges related to the current situation, four interrelated goals for the development of education have been identified: (1) highly qualified, competent and excellence-oriented teachers and academic staff, (2) a modern, high-quality education offer focused on the development of highly valued skills in the labour market, (3) support for everyone's growth, (4) sustainable and efficient management of the education system and resources (Education Development..., 2021). Namely, they focus on each person's skill "Learning to Transform", thus through the individual level to the sustainability of education and society. These interrelated goals set out in the guidelines for the development of education include the idea that teachers need professional and transversal competencies, especially in situations of uncertainty. The process of educating a professional teacher is complex and multidimensional. The education sector is gradually moving towards assessing the performance of teachers' skills and focusing on improving quality. An equally important aspect is that the complex educational issues of the 21st century often require the cooperation of interdisciplinary specialists. The administration of education increasingly often means that students' specific information is transferred from one specialist to another, where communication is one of the most important skills. The strategic management of this approach is based on an understanding of the form and content of communication that underpins healthy development. Thus, defining a pedagogical communication strategy centered on trust-based relationships as the leading one. In order to form trust-based relationships in practice, and not just as the compilation of knowledge, the issue of the relationship between the dimensions of individual development and social factors is raised, where quality is determined by the experience of subjective acquisition of both things and social situations (Medne, 2019). Higher education is not only the acquisition of specific competencies and qualifications, but also the process of human talent, emotional intelligence and personality development (Medne et al., 2019), so it can be considered that learning outcomes in any educational program are holistic and synergistic. In practice, part of the

professional (field-specific) competencies is acquired in close connection with the transversal competencies. By gradually acquiring transversal competencies, they promote the acquisition of professional or disciplinary skills and form the basis for masterful professional pedagogical activity. Transversal competencies are developed in formal and informal situations, are related to general skills and apply to all types of activities (Langa, 2015). The search for effective pedagogical solutions in teacher education has become a serious field of pedagogical research and simulation is one of the teaching methods that can be integrated into teacher education programs. Simulation is considered to be an effective method as it best links theory and practice and promotes the acquisition of specific professional skills.

Simulation is used as a teaching method in many industries. Although their use in teacher education is still less common in practice, research and experience in other sectors, it also points to their potential in the implementation of teacher education programs (Kaufman et al., 2016). The use of this method in teacher education is becoming increasingly important as the need for practice in authentic situations is emphasized. In teacher education, it is based on the professional needs of the teacher, as the results can be immediately applied in everyday professional activities. The simulation-based educational process allows for the repetition of skills up to a certain level, in a risk-free environment and without the direct presence of students (or others involved in the pedagogical process). The simulation provides an immediate reflection, giving the student the opportunity to complete the task, using the comprehension of errors or possible consequences already gained in the first attempt. Thus, a learner-centered educational process is provided in which the student tries to acquire complex professional skills without harming the learner (or other person involved in the pedagogical process) (Elspets et al., 2015). However, in the current pandemic situation, the format of remote work has challenged to improve and modify situation simulations according to the remote format. Simulations in a remote format are considered to be a fully feasible practice also during post-pandemic period (Torres et al., 2020).

Thus, the existing societal challenges for teacher education, as well as the binding regulatory situation in the organization of education, make it necessary to analyse: (1) the shifting of the focus of the implementation of the learning process from the acquisition of knowledge to the acquisition of professional and transversal skills in real time and space; (2) the improvement of professional and transversal skills of future teachers in the simulation experience and to identify students' professional benefits using it.

Simulation for the acquisition of professional skills of teacher

Simulation is a simplified but accurate model of reality (Sauvé et al., 2007) that allows users to face problem situations, try decisions and actions, experience results and model their behaviour without risking harm to the learner (or any other person involved in the pedagogical process). Simulations have many advantages, including the ability to (1) replicate scenarios with specific learning objectives, (2) provide practice longer than in real life through trial and error, experience rare or risky situations, and (3) clearly measure outcomes using defined assessment criteria.

Pedagogy is used to practice and evaluate situation simulations in scenarios such as interviews or conversations; responding to critical situations (such as challenging student behaviour in the classroom), making quick decisions. There are three types of situation simulations that are considered to be particularly effective in teacher education:

In *Scenario / Role Play simulation*, a student takes on the role of a teacher and performs tasks such as leading a lesson or coordinating a response to a complex pedagogical situation. In this case, the student is presented with a scenario and has to research the best possible solution strategies to complete the scenario.

Team scenario / role play simulations in which students perform multiple roles. This method is also often used as a way to promote collaborative skills (Eppich et al., 2011). This type of situation simulation, which simulates actual pedagogical situations, is used to teach to identify a problem and solve it within a team, thus requiring the ability to effectively set priorities and productive cooperation in a limited time (Schroffel, 2012).

Simulations with standardized patients and students. A standardized client is a person (a professional or amateur actor, or the students themselves) who accurately reproduces a script (McMaster University, 2015). This type of simulation is used to provide students with the skills to manage a variety of situations, to respond to a standardized student's individual behaviour, learning traits, and possibly special needs.

Methodology

A qualitative approach has been chosen to achieve the goal of the research. The study consisted of two stages. In the first stage, in order to achieve the aim of the study, the interview was chosen as the data collection method, as it reduces the possibility for the respondent to give imaginary "correct" answers and allows to gain an understanding frame in the context of the research topic (Cohen et al., 2007). The interviews have been analysed using quantitative context analysis, which allows for an analytical and descriptive comparison of the thematic diversity updated in the narratives with the learning outcomes identified in the study course. The linguistic context analysis of the interviews was performed in the qualitative data processing program QSR NVivo 12. The choice of the Nvivo data processing program in the study was determined by the fact that it increases the validity of the qualitative study (Siccama et al., 2008). The processing and analysis of interview data was carried out in the following order: (1) preparation of interview transcripts in Microsoft Word; (2) importing transcripts into an NVivo file; (3) open coding in the NVivo file (identification of topics, contexts, problems) by assigning a code to the relevant snippet of the interview transcript; (4) implementation of the interpretation of content, based on the context structure developed in the context analysis.

In the next stage of the study, a mapping matrix was developed based on Microsoft Excel to structure, visualize and analyse the interrelationships between the identified code (identified student's professional gain) and the planned learning outcomes. The purpose of mapping is to create a hierarchical map of skills acquisition steps for planning learning outcomes, as well as for assessing students' skills in accordance with the results planned for the study course. Mapping has been chosen as a method at this stage of the research, because one of the goals of the mapping method is to identify whether the learning activities are appropriate as a result of the study.

Sample type for this study: purposive sample. The sample consisted of teachers working in educational institutions who had completed the study course within 2 - 5 years (n=37). Age of respondents: 25 - 29 years. The study was conducted in accordance with the ethical aspects of the research, and consent was obtained from the study participants. No information was requested in the interviews that could identify the respondents. Participants in the study were informed that they had the right to terminate their participation in the study at any time. Interviews were conducted remotely using the Zoom platform.

Procedure: according to the results of theory analysis on the benefits of teacher education (practice of the Psychology study course as one of the pedagogical methods), situation simulation was introduced in 2015. The aim of this research is to evaluate the obtained results for the inclusion of situation simulations in the pedagogical process, namely, to analyse the effectiveness of the use of situation simulations in teacher education, identifying graduates' professional benefits and mapping them with the planned learning outcomes. The structure of the Psychology study course within the framework of pedagogy programs is formed logically and sequentially. The study course is developed within the framework of reflexive and small teaching approaches. The reflexive approach is chosen because the teacher's ability to reflect on his emotions and understand how they drive his teaching style and professional development (professional mastery) determines the teacher's self-efficacy (Medne et al., 2019). The small teaching approach, on the other hand, has been chosen because it is an evidence-based promotion of student learning centered on respect for the specificity of cognitive processes, thus promoting self-directed learning and enhanced meta-cognition (Lange, 2016).

Psychology study course includes the following thematic ranges: general psychology, pedagogical communication, special knowledge in the field of protection of children's rights, developmental psychology. The aim of including situation simulations as a teaching method in the acquisition of the study course was to achieve the learning outcomes specified in the study course, and thus to promote the ability of graduates to implement the ideas of educational sustainability in practice.

At the beginning of each thematic range (general psychology, pedagogical communication, special knowledge in the field of protection of children's rights, developmental psychology) students received a description (scenario) of the situation, the solution of which, in the process of acquiring a particular thematic range, they solved / modelled individually. Students were encouraged to ask questions about the information they needed and about the people involved in the situation. The lecturer provided the necessary information, which the students had identified as necessary. In the first stage of the simulation, the Open book approach is used; students are encouraged to use the available study literature to develop their own strategy for solving the situation. The second stage is a scenario simulation, which is implemented by concluding a thematic range. The simulation takes place during contact hours (both face-to-face and remote). The third stage is a reflection on the simulation. In group simulations, groups and roles in the scenario were selected at random. In the creation of groups, the principle of randomness has been chosen in order to diversify the nature of cooperation and experience of cooperation to the maximum. In turn, scenario roles were chosen at random to enrich the experience of understanding social roles.

Results and Discussion

In order to understand the professional benefits of the respondents in the process of studying the Psychology study course, interview transcripts were imported into the NVIVO program. The next step was open coding (identifying topics and contexts by assigning a code to the relevant snippet of the interview text). During open coding, eight open codes were identified according to the purpose of the study: Cognitive Benefits, Cooperation and Cooperative Learning, Problem Solving, Communication, Self-Efficacy, Motivation, Application. The identified codes are summarized in Table 1.

Table 1

Frequency matrix of codes identified in the interviews

Open code	Total Number of interviews where the open code was identified	Total open code usage frequency
Self-Efficacy	37	126
Problem Solving	35	121
Motivation	29	97
Communication	37	112
Application	35	123
Cognitive benefits	36	99
Cooperation and Cooperative Learning	28	84

Code usage frequency indicates how widely and extensively respondents talk about each question, including, indirectly, what is important or topical for the interviewee. The obtained results show that the respondents describe the cognitive benefits, problems, solutions, self-efficacy, communication, application and motivation in a sufficiently detailed and extensive way, with relatively less focus on collaboration.

Respondents associate *cognitive benefits* with the acquisition of knowledge, understanding of the content and conceptualization of concepts, the ability to interpret, in-depth learning, action-oriented thinking, the promotion of analytical thinking, scientific judgment making process and the acquisition of basic concepts in everyday pedagogical work. Respondents emphasize that when starting an independent professional activity and currently working at school, they understand and evaluate the importance of theory in the implementation of practice. The interviews emphasize that comparing different points of view has promoted analytical skills and critical thinking, as well as that argumentation skills have raised their self-confidence throughout the study process. The interpretation

of this code also illustrates the importance of self-reflection in the professional activity of a teacher. Self-reflection is a metacognitive skill that is considered to be an essential component of in-depth learning. Respondents emphasized that their assessments of learning achievements had also improved significantly, not only in the specific study course, but also in other study courses. Thus, it can be assumed that the use of simulations in one study course affects the overall performance of students, as it is likely to promote conceptual understanding. The interdisciplinary benefits of simulations should be examined in further studies of different forms. Within this code, respondents also reflect on the fact that knowledge, the ability to reflect, and critical thinking have contributed to their sense of security when starting to pursue a professional activity on a daily basis. However, the benefits of this code are more likely to be attributed directly to the learning process.

Thus, it can be concluded that the interpretation and benefits of this code are related to both the learning process and professional benefits for practice, as well as the acquisition of the content of the study course, the benefits of healthy personal development and the benefits of professional skills.

Respondents in *Problem Solving* interviews interpret their behavioural algorithms to address different pedagogical situations. The content of this code included two dimensions of content. The first dimension was related to the fact that the respondents emphasized the idea that they had learned to solve specific pedagogical problem situations directly, but the second dimension included the idea that they had acquired the ability to resolve mutual disagreements and conflicts during the simulation of situations. Respondents admit that it was the simulations that contributed to their ability to identify steps to solve the problem, namely to identify the problem, discuss alternative solutions, decide to take action and take responsibility. The benefits of this code are more likely to be attributed to the benefits of practice as part of professional mastery.

Communication. This code describes the dimension of the lecturer's involvement in the implementation of the simulation: what the respondents expect from the teacher (clarification of instructions, ideas, answers to questions, emotional understanding, professionalism, intelligence) and emotional background (support, positive attitude, encouragement, sense of humour). Namely, the content of this code in the context of the implementation of simulations emphasizes trust-based relationships between the teacher and the student. The interpretation of the content of this code marks the relevance of the ideas of a people-centered approach in education. Respondents emphasize that the lecturer's support and understanding has facilitated their learning, especially in selecting and discussing new information, as well as in complex situations. Thus, the social role of the lecturer as a cooperation partner is emphasized. Respondents within this code emphasize that the example of emotional support demonstrated by the lecturer is also implemented in their professional activities. Thus, the importance of the example as a pedagogical method in higher education was outlined.

The analysis of this code leads to the conclusion that during the implementation of simulations it is important that the communication process includes a relationship based on trust and cooperation with the teacher. It would be important to study the benefits of lecturers during simulations, which could be one of the dimensions of further research in this study. The interpretation of this code is related to both the benefits of the study process and the benefits of professional mastery, however, mainly the position and personality of the teacher in the learning process is established in this code.

Self-Efficacy. Within this code, respondents emphasize that the simulation method has boosted their courage, confidence in their pedagogical competencies and decisions, and promoted an optimistic approach to managing pedagogical situations, including balance in difficult situations. Respondents emphasized that when reflecting (over a longer period of time) on their pedagogical activity, they realized that simulations had made them more confident that they could teach students. Respondents indicated that simulations have contributed to their understanding of the need to learn for themselves. The interpretation of this code is mainly related to the benefits of professional skills for practice.

Motivation. Within this code, motivation was related to the performance of tasks, interest in learning, cognitive interest in completing the simulation provided by the emotional background. It is accented that the respondents enjoyed participating in the simulations: they felt interest, joy, inspiration. Respondents within this code also pointed out that a sense of belonging to the group promoted motivation. Respondents also indicated that the incompleteness of the situation had stimulated their desire to explore. This code outlines the relationship between achievement and self-confidence, with

respondents affirming that situational awareness has boosted their self-confidence. The interpretation of this code is related to both the learning process - to complete the task, and the interest in how the solutions work together in practice.

Application. Within the framework of this code, the respondents emphasize that when starting an independent professional activity both in everyday pedagogical situations and in difficult pedagogical situations, they have felt safe, they knew how to act in situations that had to be dealt with in everyday practice. They have also been able to flexibly change their methods of dealing with situations. The simulation process has provided a form of practical learning in which they have been able to take an active part in situations. Thanks to this active participation, the respondents were able to use the taught theoretical concepts in practice. The interpretation of this code is mainly related to the benefits of professional skills.

Respondents interpret *cooperation* as an interaction between the people involved. Within the framework of this code, it is emphasized that when endeavouring into their independent professional activity, there has been an understanding of the specifics of cooperation and algorithms for solving various pedagogical situations and opportunities for active participation, support and cohesion. They have developed the ability to argue their point of view, which has made them feel safe in their professional life. In the interpretation of this code, opinions about the nature and involvement of the team were dichotomous even in one interview. On the one hand, respondents emphasized that teamwork is a tool that facilitates decision-making in the simulation, on the other hand, discussed the importance of each participant's involvement in the simulation, the fact that there were colleagues who did not want to take responsibility or had poor communication skills that made it difficult to work in a team. Despite some negative connotations, all respondents acknowledged that this experience helped in their professional activities overall. The interpretation of this code is related to both the benefits of the study process and the benefits of professional mastery.

Results of the second stage of the research

In order to analyse the connection of the identified students' professional benefits with the study achievements planned in the study course, a mapping matrix was created, which provided an opportunity to link each code identified in the interviews with a specific study achievement planned for the study course. The data structure of the mapping results consists of the identified professional benefits (collaboration and collaborative learning; cognitive benefits; problem solving; communication; self-efficacy, motivation; application) and learning outcomes defined in the course description (seven in total): to promote students' professional autonomy teaching methods and techniques; provide feedback; to solve pedagogical situations and personalize teaching according to learning needs; is able to create a safe, inclusive and supportive learning environment); understands the issues of teacher ethics, safety and children's rights, as well as the pedagogue's role in the learning and socialization process, is able to cooperate with colleagues, parents and society; is able to use the acquired theoretical knowledge in practice: to solve psychologically complex situations, conflict situations, to work with the diversity of learners; understands one's personality (is able to identify in different social roles); understands the importance of self-education in professional development and further education; is able to communicate respectfully with learners, colleagues, learners' parents and society; by analysing the dynamics of students' achievements, is able to systematically evaluate and improve their performance; is motivated for lifelong learning and professional development in accordance with the latest findings in pedagogy and psychology.

It was possible to map all the codes identified in the interviews against the study results determined in the study course. Such results indicate a good succession between the planned learning outcomes and the competencies acquired by the students during the learning process, in which situation simulations are used. By mapping all the codes against the study results specified in the study course description, it has been established that these codes correspond to all seven study results specified in the Psychology study course. Analysing the results obtained in the mapping, it can be concluded that the situation simulation as a study method corresponds to the planned study result of the Psychology study course. Furthermore, this study confirms the benefits of simulation as a method, as well as gain of planned study results and the real skills of graduates in practice.

Discussion and Conclusions

Research interest in the inclusion of situation simulations in teacher education is growing as the pedagogical focus shifts from a lecture-oriented environment to an organized one involving students. Thus, active learning methods, including situation simulation, are being practiced more and more. It is important that the changes introduced by the pandemic, which required that higher education adjusts accordingly, allow us to predict that simulations will play an important role in the pedagogical process in teacher education as well. The aim of this study was to determine the benefits of teachers' acquisition of professional and transversal competencies when situation simulation is used in the pedagogical process.

It was concluded that the respondents have identified the benefits of situation simulations both during the studies and starting an independent professional activity. During the studies, this method has promoted performance not only in the specific study course, but also in other study courses, which allows us to assume that situation simulation promotes students' conceptual understanding. In addition, simulations are interpreted as an emotionally enjoyable learning method that requires active and shared engagement and thus also helps to improve learning skills. An equally important place is given to the lecturer, who implements situation simulations both because of his personality and the way of communication with students. That allows us to assume that the importance of trust-based professional relationships is also emerging in the context of higher education. Respondents emphasize that the skills acquired in simulations when starting a professional career have promoted their independence, self-directed decision-making, sense of security, and flexibility, which are components of professional autonomy. Respondents also emphasized equanimity when dealing with situations of different levels of complexity, perseverance, which respondents attribute to readiness to deal with situations even when they are discouraged, self-reliance - faith in oneself and one's potential, and meaningfulness - evaluation of one's own contribution to solving situations. All of these criteria are part of resilience (Caplan, 1990), so the use of simulations can be considered to enhance students' resilience.

The results indicated a good succession between the planned learning outcomes and the competencies acquired by the students during the acquisition of the study course. Therefore, it can be concluded that situation simulation as a teaching method is appropriate for the implementation of the Psychology study course in order to achieve the planned results. Also, the results of this study confirm the efficacy of simulation as a method, as well as the gain of the planned learning outcomes and the acquisition of graduates' competencies in practice and thus can be both a teaching method and a type of examination.




Although this study determines the sustainability of the situation simulation framework in the context of teacher education, it has limitations. The benefits of using situation simulations in this study were considered from the student's point of view, however, in order to objectify the results of the study, it is important to find out the position of lecturers, because the inclusion of situation simulations also marks complex aspects. For example, costs (computer simulation), time resources (both in the preparation and implementation of simulation scenarios), and possibly a change in lecturers' understanding of learning approaches. Situation simulations are a type of simulation that most educators implement individually. In order to develop scenarios relevant to the pedagogical reality and to integrate them into the implementation of the study course, it requires lecturer's time and understanding. The theoretical basis, a clear understanding of the behaviour to be practiced or evaluated, a professional simulation model, sufficient realism, and a feedback mechanism are essential in the situation simulation method. It would therefore be useful to continue research in this direction as well.

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Implementing Transferable Competencies in the Curriculum Through the New Course "21st Century Skills": A Case Study

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Abstract: The paper presents the design, implementation and evaluation of the course "21st Century Skills" which is a partial output of the international project "CATCH 21 - Changing the Approach to University Teaching". The topics of the course were chosen based on the results of qualitative interviews with HR managers who assessed what transferable competencies are missing in university graduates. Prior to the start of the course, the students underwent a self-assessment of the transferable competencies. Within a course several innovative activating methods were used. At the end of the course, students rated the relevance of the course itself.

Keywords: transferable competencies, 21st Century Skills; curriculum, tertiary education environment, self-assessment.

Introduction

Transferable competencies are the generic capabilities which allow people to succeed in a wide range of different tasks and jobs (Enterprise in Higher..., 2019, 5). The development of transferable competencies is still actual priority of HEIs, the competencies are considered a "global currency of the 21st century" and the European Commission characterizes competence as a "win-win" strategy for individuals, society, employers and the economy. M. Yorke specifies that the basic idea is that skills learned in one context could readily be transferred to another (Yorke, 2006, 12). A. Ylonen points out that 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). To become sustainably competent for functioning in the continuously changing labour market, a student has to develop meta-skills and transferable competencies (Kuijpers, et al., 2009).

The above is becoming a central issue in the current academic environment. Two basic sets of questions arise here. The first set of questions: Are current graduates prepared for the labour market? What are the current requirements of employers on graduates of degree programmes? Which 21st century competencies do students lack? Second set of questions: Can transferable competencies be developed in university students? Which methods can be applied to teaching in order to develop specific 21st century competencies?

The answers to the above questions were also explored in 2020 (within a qualitative research of the project "CATCH 21 - Changing the Approach to University Teaching"). In this paper, only the results at the national level, i.e., for the Czech Republic, are presented. Based on the answers of employers (especially HR managers), a course was designed and implemented in the curriculum of university training. Before the course itself, the students assessed some transferable competencies, i.e., to what extent they have acquired the competences. Subsequently, the course was designed and taught for a semester at the end of which the students evaluated the course. The respondents were students in the Guidance in Vocational Education program. The course was implemented at the Institute of Education and Communication of the Czech University of Life Sciences Prague.

Transferable competencies reflect the demands of the world of work across occupational sectors (e.g., teamwork etc.). The higher education environment can develop transferable competencies in a variety of ways, for example, by implementing a course in the curriculum. For example, A. Assiter argues that transferable competencies are so significant for career and social life that they should be included in curricula in a notable rate (Assiter, 2017). A. Baylei highlighted this fact already in 1990 when she argued that transferable competencies should be developed within academic subjects as a benefit, bearing in mind future technological development and the variability of job positions (Baylei, 1990).

Therefore, the paper offers a case study of how transferable competencies can be implemented in the curriculum.

Methodology

Course design

The starting point for the course concept was first the results of a qualitative survey of employers. One of the questionnaire items was a closed scaling question, in which the participants rated the importance of seven chosen competencies on a scale from 1 to 10. Table 1 shows the HR managers' ratings of 21st century skills (Smékalová, et al., 2021, 315). The interviewed managers consider two skills of newly hired managerial staff as the most important – "Collaboration" and "Communication".

Table 1

The managers' ratings of 21st century skills in terms of their importance for recruitment

List of 21 st Century Skills	Manager 1	Manager 2	Manager 3	Manager 4	Manager 5	Manager 6	Mean	Standard deviation	Order of importance
Critical Thinking	9	10	9	9	8	8	8.83	0.687	3
Collaboration	10	10	10	10	10	10	10.00	0.000	1
Communication	10	10	9	8	10	10	9.50	0.764	2
Creativity & Innovation	9	5	5	10	7	8	7.33	1.886	6
Self-Direction	8	9	7	10	9	9	8.67	0.943	4
Making Global and Local Connections	9	8	8	5	8	4	7.00	1.826	7
Using Technology as a Tool for Learning	7	9	10	9	7	5	7.83	1.675	5

These findings also correspond with research results on importance of peer collaboration, which was implemented at the University of Latvia in years 2018 and 2019. These research results also implicitly suggest that to demand students to write papers and reports together as part of a peer cooperation activity may be successful only if these tasks are first used as part of peer collaboration assignments, which could teach the students how to successfully work in a team with various people and, thus, make them more self-confident, as well as convince that peer collaboration is a useful skill to possess for the future career (Apse et. all, 2020, 34).

The results gained from the guided interviews were integrated into the course in order to strengthen all the most frequently mentioned competencies, i.e.: verbal and nonverbal communication, active listening; cooperation, teamwork; critical thinking, problem solving; self-directed learning, creative skills; multicultural skills; modern ICT tools in education.

The new course "21st Century Skills" had following annotation and objectives:

- **Annotation:** The course is divided into seven thematic units (modules): communication, collaboration, critical thinking, self-direction and self-reflection, creative and innovative thinking, multicultural skills, and ICT skills. In addition to the theoretical information about individual skills needed for education, career and social activities in the 21st century, students will develop practical skills – critical and innovative thinking, teamwork, communication, ICT and multicultural skills – through team activities. The course is implemented as one of the main activities of the international Erasmus+ project "CATCH 21st Century Skills".
- **Course objectives:** The aim of the course is to acquaint students with tools, techniques and methods for the development of soft skills that are essential for education, specific job position and social activities in the 21st century.

The education plan included the following lectures and seminars.

Lecture:

- **COMMUNICATION SKILLS:** verbal and non-verbal communication, pedagogical communication;
- **COLLABORATION:** principles of cooperation and teamwork;
- **CRITICAL THINKING:** anchoring critical thinking in the project (reading and writing for critical thinking), importance of critical thinking, cognitive bias, logical fallacies;
- **SELF-DIRECTION AND SELF-REFLECTION:** self-directed learning and motivation, metacognition and self-reflection, learning approaches by Ramsden (Ramsden, 1992), the role of emotions during the learning process;
- **MULTICULTURAL SKILLS:** European networks for international cooperation, national specifics of selected countries, tools for avoiding ethno-centric approach and schematic thinking;
- **ICT SKILLS:** internet, social media.

Seminar:

- **COMMUNICATION SKILLS:** active listening, trial microteaching lessons;
- **COLLABORATION:** creating teams and facilitating teamwork (Belbin's Teams Roles);
- **CRITICAL THINKING:** development of critical thinking with the help of interactive methods;
- **CREATIVITY AND INNOVATION:** methods to enhance creativity, creative problem solving (brainstorming and brainwriting);
- **MULTICULTURAL SKILLS:** making global and local connections, globalization, sustainable development;
- **ICT SKILLS:** ICT skills as a tool for learning (advanced tools on Moodle such as Competency Frameworks, Individual Learning Plans, Rubrics) and modern applications such as Mahara E-Portfolio System, DojoIBL, Canva, Genially, Learning Apps, Padlet, Kahoot and Mentimeter.

The course guarantees the acquisition of the following learning outcomes (knowledge, skills and competencies recognised under the ECTS):

- **Knowledge:** Students will learn to identify various digital applications and tools for self-directed learning and self-reflection. They will also gain new knowledge on self-directed learning, self-regulated learning models and the most common strategies. They will learn basic concepts such as metacognition, motivation, student independence, interests and self-regulation, self-efficacy, trust, self-esteem, etc. Students will know different types and ways of effective communication and cooperation, and active listening. They will understand their importance, including the possibility of application in communication and collaboration with colleagues, external partners and other people. Moreover, they will understand the basic definitions, theories, strategies and techniques related to critical, global and creative thinking.
- **Skills:** Students will strengthen soft skills such as effective and fair communication, active listening and teamwork, critical and creative thinking, self-management, self-motivation, self-reflection etc. Students will learn how to use popular techniques for the development of critical and creative thinking or ethnorelative approach. Students will manage their work and communication in a team. They will learn to exist safely on social networks and learn modern ICT tools for online learning such as Kahoot, Mentimeter, Genially or Learning Apps.
- **Competence - Communication:** Students will develop teamwork and communication skills in English by solving numerous tasks in small groups. Students will strengthen their multicultural skills by getting acquainted with the cultural specifics of European countries and the differences of cultures outside of Europe.
- **Competence - Opinion:** Students can realistically assess their learning opportunities by mastering self-directed learning practices. Students will learn critical thinking throughout the learning process and can assess the opportunities and threats of the global world. Students will remove the schematic view to other mentalities and cultures.
- **Competence - Education:** Students will strengthen independent thinking and reasoning. They can understand the needs of lifelong learning in connection with the further development of their own personality. They continuously monitor professional literature and other relevant sources.

The course is conditioned by the knowledge of the English language at a minimum level of B1. The form and methods of teaching, and the completion of the course are as follows:

- **Learning activities and teaching methods:** Activation methods (dialogue, heuristic interview, problem teaching, role-play method) are used in lessons. Modern information technologies such as Kahoot and Mentimeter are also used. Communication between learners and a teacher is also conducted through e-learning in LMS Moodle.
- **Assessment methods and criteria:** During lectures, seminars, and e-learning in Moodle, the students work on tasks given by the teacher. The condition for obtaining credits is an active participation in contact lessons with absence not exceeding 25%, and work in LMS Moodle.

Course Implementation

The course was implemented in the summer semester of the academic year 2020-2021 in the scope of 4 hours per week (2 hours of synchronous teaching and learning and 2 hours of work individually on tasks in LMS Moodle). The course was taught exclusively in English and was completed with a credit of 4 ECTS. The course was elective due to the language requirement, being taught in English. The course was designed for the purpose of contact lectures and seminars; due to the restrictions of the COVID-19 pandemic it was necessary to implement it in an online environment. The synchronous teaching and learning took place in a video room in the MS Teams application. Self-study was conducted in LMS Moodle where the students were acquainted with the objectives of each synchronous online lesson, had downloadable learning materials, worked on independent assignments, and completed feedback questions to determine whether they understood the topics correctly.

Seven teachers contributed to the course two of whom were external tutors, experts in ICT who brought the latest knowledge in the field of digital technology and digital education.

The students were participants in the bachelor's degree programme Guidance in Vocational Education, 2nd year of study. As an added value, the course was also attended by 2 students from abroad under the Erasmus + programme.

Prior to the start of the course, students were asked to complete a pre-test assessing their initial knowledge of specific competence clusters, namely: collaboration, self-direction, communication, critical thinking, creativity and innovation, using technology as a tool for learning, and making global and local connections. In detail, they had to specify their level for each one of the clusters ranging from 0 (no knowledge) to 10 (plenty of knowledge).

The results showed the following self-assessment of the initial level of acquisition of transferable competences prior to the implementation of the course, see Figure 1.

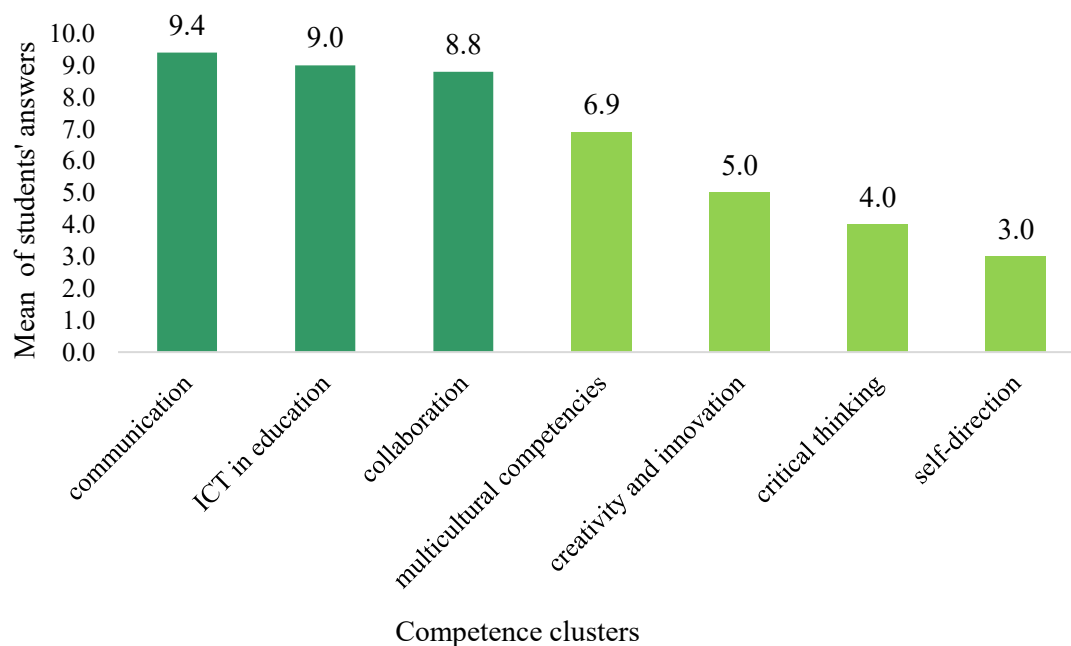


Figure 1. Students' level of acquisition of transferable competencies prior to the start of the course.

The transferable competencies Self-Direction, Critical Thinking, Creativity and Innovation showed insufficient acquisition. These competencies were therefore the priority focus of the course.

The course was therefore taught through activation methods, practical skills were developed, and emphasis was placed on interactivity and feedback.

An illustrative example of an activation method, called the cinquain (Marcus, 1974), is shown in Figure 2. Students were asked to reflect on the significance of communication. They then constructed their responses through the cinquain method.

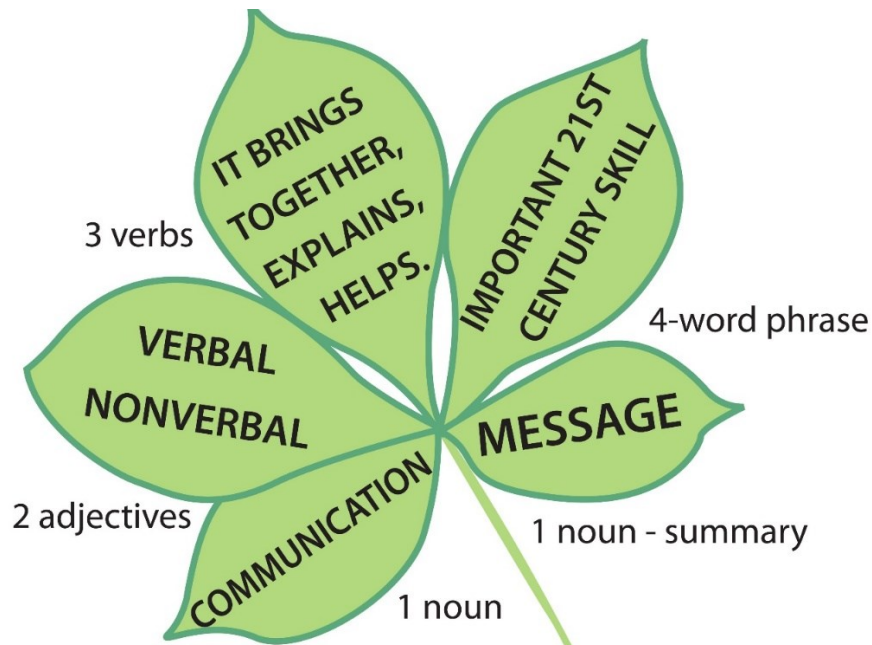


Figure 2. Graphic illustration of the cinquain method.

The cinquain method and the example above are clear evidence that: (a) students had to reflect on the topic of communication using critical thinking to realize the complexity of the problem; (b) the different representations of the cinquain (in the form of a plant, a pyramid etc.) reflected students' creativity and innovative thinking; (c) students had to use self-direction to apply the assignment and its methodological steps to the final solution of the assignment.

Other methods or professional test used during the course were for example Torrance Test of Creative Thinking (Torrance, 1974), Six Thinking Hats (Bono, 1985) in creativity and innovation module, fish-bone and diamond method in lessons to enhance critical thinking.

When reflecting on specific transferable competencies through discussion during lessons, students confirmed that there was a development of transferable competencies compared to the initial assessment. However, the students did not dare to estimate the interval of improvement because they objectively reported that the course lasted only one semester and, therefore, the development of transferable competencies could not be considered sufficiently internalised.

Results and discussions

At the end of the semester, students rated the course very favourably. The course was rated as the best of all the courses in the semester in a continuous evaluation survey of all courses which takes place regularly at the Institute of Education and Communication at end of each semester. Historically and statistically, the course had the best rating in the last 3 years, as students reported the highest scores on all items assessed. The rating scale was from 1 (minimum) to 4 (maximum) expressing agreement with the statements. The overall course score was 3.8. The loss of 0.2 points was only due to the item that assessed the course learning load which the students rated as higher than usual. The load involved such demands on the student as English language proficiency, focus for interactive learning, providing feedback, and group involvement in particular assignments.

From the teachers' point of view, the course was also perceived favourably. Students were motivated, willing to cooperate and there were interesting creative handlings of individual tasks. From a didactic point of view, examples of the application of activating methods were given and then applied to other examples so that the educators were confident that the students understood the specific methods sufficiently. The form of teaching (online environment) was a limitation as was the time loss for explaining the assignments for the given activation methods which were not known to the students. Many of the methods are taught in a so-called experiential way or experiential learning, which the online environment does not allow for much. Even though the teachers used the shared whiteboard Google Jamboard and numerous modern applications like Kahoot, Learning Apps, Mentimeter, Genially during online teaching, practicing skills in an actual classroom through face-to-face interactions can never replace the virtual environment for 100% (Figure 3).

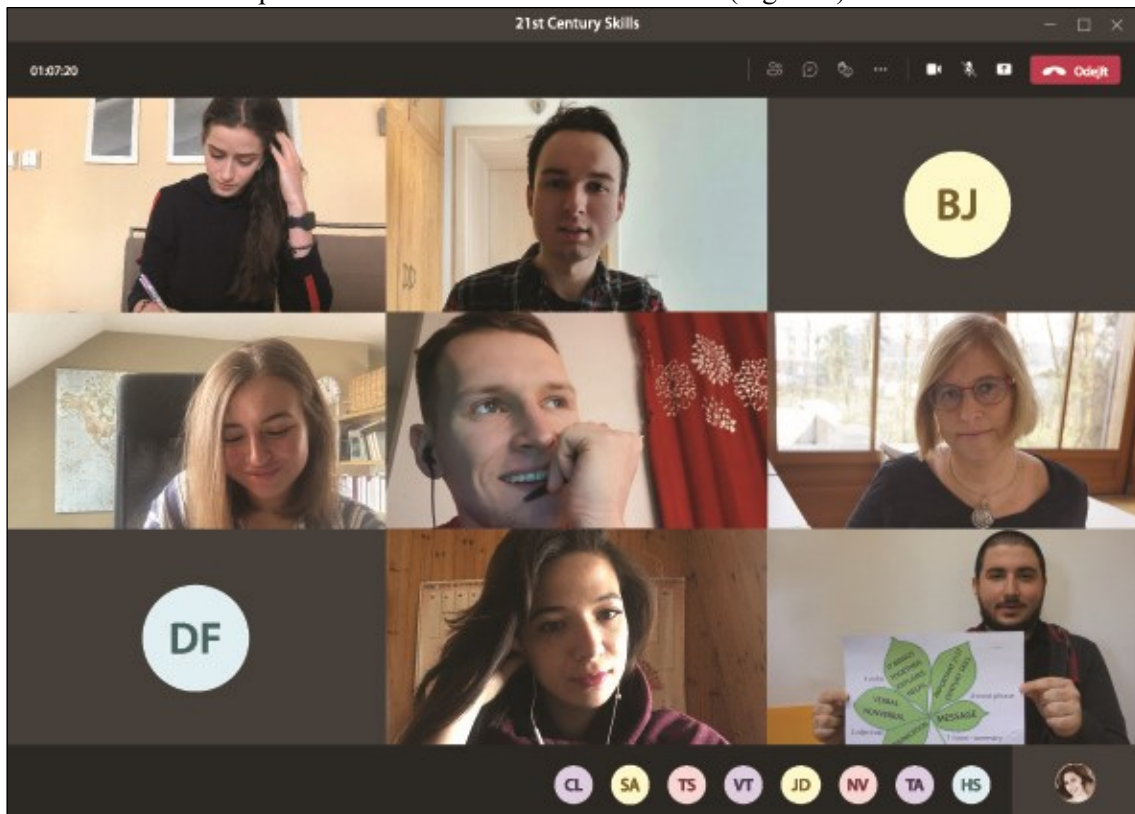


Figure 3. Synchronous teaching in MS Teams.

Conclusions

The case study confirmed that the development of transferable competencies reflecting 21st Century Skills can be implemented in the curriculum. It proved that the course should be included in the first year of the curriculum to expose students to activation methods that promote transferable competencies. This means that they should know the different methods, their assignments and how to work with them. This knowledge will enable teachers to avoid having to spend time explaining the methods in the classroom in subsequent studies.

An advantage of the implemented course was also that the students acquired a different way of learning than the traditional one and they would be better prepared for interactive learning.

From an organisational point of view, it is advisable to include activation methods cross-sectionally even in other courses to enable measuring the interval of development of transferable competencies at the beginning and at the end of the bachelor's degree.

The results of the case study have an impact in that the course will continue to be counted with in the curriculum and will be regularly included as an elective subject. In the future, there are ambitions to statistically investigate the long-term effects of the course on the development of transferable competencies and teaching effectiveness.

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Introducing Veganism Education

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Abstract: The current thinking of the majority of people is based on the tacit belief that animals are objects without consciousness that can be used as food, disguise material and toys. This view needs to be changed by introducing veganism - the scientifically based viewpoint that animals are relatively primitive conscious living beings that must be treated as such. The ongoing trend toward improving animal welfare and spreading acceptance of animal rights must be supported by educational efforts. The educational community must contribute to such a change in mentality by changing school culture and educational processes. The school education system must teach and support the vegan mentality and behaviour. In this article, changes in educational goals and practises are described. Discussion topics about the use of animals for food, entertainment, and other purposes, are offered. Guidelines for promoting veganism and features for educational innovation are given.

Keywords: veganism education, veganism, humane education, eco-friendly education.

Introduction

Today, animals continue to be used for human enjoyment, entertainment and cost reduction, being seen as things having no consciousness and desire to live. This is at odds with simple observations and advances in ethology and neuroscience, which demonstrate the similarity of animal nervous systems to the human nervous system, including the ability to perform basic mathematical functions in the head (Irie et al., 2018).

Habits and attitudes towards the use of food of animal origin and animals are formed in people at pre-school and early school age. The modern education system supports the archaic system of beliefs about animals which is in the interests of the part of the society benefitting from the use of animals. However, in recent decades there have been changes in the culture and the ethics of animal use. The education community must support, sustain and develop these trends.

At least since the 19th century within the framework of the humane education project, there have been efforts to change people's mentalities and mould children's minds into a new shape by abandoning traditional beliefs about animals that are manipulated archaic relics and developing new ones, cf (Burnett, 2000; Unti et al., 2003). The education system must introduce and further develop humane education by introducing features and activities that promote and cultivate empathy and respect for all life. Innovations in education content, methods and environment must be preceded by professional, public discussions.

Veganism elements in education and the corresponding discourse in the education community will greatly contribute to promoting sustainable mentality and life patterns, cf. (Iliško, 2020). Vegan behaviour is a health and environment sustaining factor. The established health and environment components of the educational discourse will interact with the veganism component, see also (Adams, 2009; Cartea, 2005). Most importantly, vegan thinking leads to an ethically justified, humane mentality and behaviour, see also (Heasley et al., 2020). The veganism discourse and the involved people will influence and develop the educational tasks, steps and goals related to empathy with respect to both animals and humans, cf (Faver, 2010; Samuels, 2007; Thompson et al., 2003).

This article describes and explores the possible features of an education reform which would establish veganism as an educational goal. **The aim of the article** is a motivated call and the posing of a problem for the international education community and society in general - to introduce vegan culture and upbringing in schools via educational innovations.

Methodology

The general qualitative research problem touched in this article is the feasibility of inclusion of veganism elements into educational framework. The main research task was to formulate an extended proposal supporting development of veganism education features, to identify subareas, to collect lists of supporting arguments and educational features for such a development. The task was performed constructively studying existing published literature on animal welfare and education, applying it for needs of the task.

Results and Discussion

Overview of basic concepts of veganism

Human development has reached a level where the use of animals for survival is no longer necessary in many ways that were important in earlier stages of history and evolution. In such directions, the use of animals continues for pleasure, entertainment, cost reduction and employment. These animal uses are linked to misconceptions about animals. People do not have to live with these misconceptions, because no misconceptions are desirable and productive, and they degrade their carriers.

In this article, by veganism, the author means a concept that goes beyond the exclusion of animal products from the diet. The author defines veganism as a philosophy based on the abandonment of the use of animals for purposes that are not important to human health. Veganism - non-acceptance of the use of animals is an integral feature and part of individual and collective development and maturity. Vegans and animal rights activists are constantly expressing the need to review and change people's mentalities and attitudes towards animals to reduce the amount of animal suffering – to significantly reduce the use of animal products in food and medicine and to exclude the use of animals in all ways that are not important for human health. Apart from introducing prohibitively high costs and requirements, the pro-vegan mentality change is a necessary condition for abandoning unethical uses of animals. A significant change in people's mentality seems impossible without changes in educational goals and reforms in education.

A part of the society – individuals, business companies and professional communities that are involved in the use of animals, carry out constant propaganda to maintain the existing mentality, which is also felt in education. This is done to maintain their employment and income - demand and consumption of their products and services. They can only exist in the current proportions because people are raised not to think about animal consciousness, are brought up to be insensitive and cruel to animal suffering. The public is misled about the realities of using animals. Special attention is paid to children who, due to their “blank sheet of paper” state, their sharp feelings and instincts, are easily affected. The experience and mentality of violence and cruelty negatively affect people involved, it spreads from people working in animal husbandry and other animal exploitation industries to the rest of the society. The high weight of animal-using industries is typical of countries with a low level of industrial and general development. Non-food industries based on the use of organic matter are a sign of backwardness.

There is also the use and neutralization of animals for human health purposes, which can be considered at least partly ethically justified (use of animals in the testing of drugs and surgery techniques, training of surgeons, use of animals as donors of biological substances and organs in medicine and science, drug production, pest and pathogen neutralization).

Necessary features of veganism education

The following sections provide proposals of general guidelines for implementing veganism education and discussion themes.

General guidelines. The education system and its personnel need to adopt scientifically and ethically sound, scientifically updated views on animals and plants and change the education system and environment. Features need to be introduced and integrated into the education system to promote veganism and corresponding behaviour, to abandon the archaic thinking about animals. This should be done starting from pre-school age and first school years. Veganism education must change children's and other learners' attitudes towards animals which is instinctive and formed by evolution.

Vegan education must contain both global and local features which would address national traditions of animal abuse. It must be introduced with changes in national educational laws and the corresponding regulations of national authorities.

The school must encourage people to give up all uses of animals, starting with less important ones. Students need to be taught to feel guilt and other negative emotions about using animals. Schooling must initiate vegan behavioural patterns in their simplest forms which will have a potential to be developed in future years. It is unrealistic to force everyone to give up the use of products of animal origin in food before their artificial substitutes are available, as this is a basic physiological feature developed by evolution. However, the maximum possible abandonment of animal products for human consumption and complete abandonment of other uses and treatments of animals not related to human health should be encouraged. At preschool and elementary school age, given children's susceptibility to quasi-religious, emotional attitudes, it is possible to nurture the belief that humans are superior, god-like beings, who as such must treat lower beings ethically, reduce the amount of animal suffering and its extreme manifestations. Understanding veganism and renouncing the abuse of animals is a process that goes hand in hand with an individual's intellectual development. The school must stimulate students' ethical and intellectual development through veganism.

At the youngest possible age, students should be taught about the close similarity and evolutionary relations of animal and human biology, especially nervous systems. Publications in scientific journals such as *Ethology* and the *Journal of Ethology* are preferred. Studies demonstrating the ability of animals to count, such as (Irie et al., 2018), should be discussed. Vegan education can be integrated into biology, psychology, language, business, housekeeping classes and extracurricular activities.

Vegan upbringing should be done without expecting the children's immediate understanding and positive reaction. By analogy, religion and religious upbringing can be recalled - all religions proclaim high moral values that are observed by only a fraction of people who assert themselves as religious. Like religious upbringing, vegan upbringing must be seen as a facilitator of children's moral and intellectual development used to improve society. See (Linzey, 2013).

In addition to veganism, it is desirable to cultivate a mentality supporting reasonable and rational use of plants. For instance, the use and destruction of plants solely for aesthetic purposes (such as growing Christmas trees and flowers) must be viewed as ethically unjustified practices.

Aims and directions of vegan upbringing. The goals of vegan education should be as follows.

1. To instil in children the perception of animals as beings with human-like instincts and consciousness that are only more primitive than humans, to instil guilt feelings and a duty to stop causing suffering to these lower beings, to stop keeping animals in unnatural conditions.
2. To cultivate the complete abandonment of all uses of animals except for food and medicine.
3. To change the attitude towards the use of animal products in diet equating them to medical substances, consciously limiting their use. To cultivate dignified and emphatic treatment of animals used for food and medical purposes.

Directions of vegan upbringing include:

- a negative general attitude towards the use of animal products in food;
- a negative attitude towards the use of animal products in clothing, footwear, hygiene and perfumery;
- negative attitudes towards the use of animals for recreational purposes, such as pets, zoos, etc.;
- a highly negative attitude towards deliberate violence against animals for recreational purposes, such as hunting and fishing;
- minimally cruel and violent treatment of animals considered to be pests;
- negative and critical attitudes towards violent use of animals in low-value research and educational activities;
- understanding and empathy for justified uses of animals in food and medicine.

Vegan awareness and upbringing topics need to be introduced in several study subjects. Biology lessons should explain the similarities between animal and human body structures and nervous

systems, the potential health damage that can be caused by products of animal origin, and the impact of animal use on the ecology. Animal consciousness research and evidence need to be mentioned. The fallacy and marketing enforced nature of past and present views must be shown. Psychology classes should teach about the human mental characteristics that are related to the interaction with animals, such as aggressiveness. Subjects related to psychology should include topics and exercises on animal consciousness and intelligence and their manifestations. In housekeeping and personal hygiene classes, only vegan cooking, proper storage of vegan food and agricultural products should be taught. In economics classes, it is necessary to teach about the marketing techniques of animal users, about the place of animal-using industries in the economy. History classes may include topics on the history of the use of animals, the need for the use of animals in earlier periods of history. National features and traditions should be realistically and critically discussed in appropriate classes.

In school canteens, individual and collective events in schools, mainly vegan dishes or dishes prepared according to special recipes should be used.

During school attendance, on school premises, in teaching materials and in the electronic resources of the education system, propaganda, advertising and mention of the use of animals through visual and other means must not be permitted. Usage of animal images should be banned especially at early ages. The position of all teachers in appropriate collective and individual communications with students must be vegan. Teachers must set examples of vegan behaviour.

The education system must maintain the process of tabooing and forgetting the part of the traditional language associated with the use of animals. Teachers should exclude from their language words that refer to parts of animal bodies, products and processes related to animals, such as "meat". Such words should be replaced by words and phrases that create and support vegan attitudes. Negative words and expressions that misuse animal names, such as "bestly", should also be excluded from the language. On the other hand, words and deceptive semantic tricks invented by animal businesses to mask animal abuse, such as the phrase "to put to sleep" or giving pets verbal human characteristics for marketing purposes, should be uncovered with criticism before children. It is also desirable to introduce new features in the language that would facilitate the ability to consider animals as beings with human-like characteristics.

Students should be informed about the negative features of animal use processes. Human insensitivity and cruelty to animals must be demonstrated. On the other hand, understanding and respect of the part of the society involved in justified uses of animals in the medicine and the food industry must be taught.

Age-appropriate instincts of students and associated aggression towards animals should be taken in account. Vegan education is similar to anti-smoking and anti-alcohol education - it must be a sustained long-term project that will give the desired results after several generations.

Vegan thinking as a sign and a part of high intellectual development must be taken in account in the human resource management of the education system. It must be defined as a part of the teacher's professional competence. Vegan-minded individuals must have a higher professional status and greater decision-making rights in education. Schools and education systems must not be run by individuals who do not understand or accept veganism.

Vegan upbringing methods should be planned according to the age of the children. Personification of animals may be used at pre-school and younger age levels by giving them names. New forms of play and entertainment that do not use animals and references to them should be introduced. Scientific arguments can be used in the senior classes. It is desirable to group students in ways that would support spreading the vegan attitude. Continuing education and adult learning should contain veganism education. Vegan education should be included in university teacher training curricula. Agricultural study programs and educational practices may need reviews and changes. Humane education project, its history and current state should be discussed.

National and international workgroups of active people willing to discuss and promote veganism should be formed. Results of the discussions should be considered by the education authorities.

Use of animal products in food - upbringing and changes in the environment

The use of animal products in most traditional diets is the most widespread and cruel form of animal use that should receive a significant amount of attention at school. The previous period of evolution, in which the use of animal products has been important for survival, has imprinted into human consciousness the high nutritional value of animal products encoded as the satisfaction and valuable taste feeling of these products. Taste enjoyment as a factor of demand has significantly increased the use of animals using modern technologies. See (Linzey et al., 2019).

While it is unrealistic and unnecessary to teach complete abandonment of animal products in food, it is necessary to change people's attitude to it.

Students should be taught that animal products can only be ingested to the extent necessary for the maintenance of health and growth. The use of animals in food must be rhetorically equated with cannibalism. Reductions in the volume of animal products can be permanent or periodic when animal products are not consumed for certain periods. The educational goal should be to equate the use of animals in food with their use in medicine, with corresponding changes in thinking and behaviour. Additionally, it is necessary to create the perception that animal products in the diet are something reprehensible, shameful and undesirable. It is necessary to train abstinence from the consumption of animal products in public, to adopt the use of necessary animal products as an intimate, covert procedure to be performed alone at home behind closed doors. It is necessary to cultivate the use of only plant-based products at celebration events. The evolutionary origin of the taste and satisfaction caused by animal products has to be explained.

In biology classes, veganism can be associated with the existence of common ancestors of humans and all other living organisms. Only vegan cooking should be considered during housekeeping classes.

Catering in educational institutions. Regardless of veganism education, school catering culture and meals are part of the overall educational process. Taste hedonism should be used as an educational tool. The school canteen menu and school meals must be based on symbols and metaphors and must be of high ethical and aesthetic value.

Catering activities in educational institutions must be used to support veganism education. For vegan upbringing and behavioural change, in school, kindergarten canteens and collective events, the use of animal products must be reduced or even stopped. This needs to be done particularly thoughtfully and consistently with younger students, as eating habits and pleasure reflexes (pleasure traps) develop at an early age. Students should be introduced to plant-based food and short periods of eating only such food. It is desirable to introduce vegan-oriented teachers' speeches during meals, which would be analogous to the grace prayers popular in Christianity.

Animal products must not be clearly visible, concentrated and compactly spaced in food. They must be processed and mixed or coated with plant products. Dishes with ingredients of animal origin must be deliberately made unsavoury, e.g. by removing certain components, but dishes made from plant products must be as tasty as possible, e.g. by adding extra spices. The use of delicacy products, such as ice cream, containing animal products should not be permitted. These and other appropriate modifications must be made without compromising the necessary nutritional value. Nutritionists need to offer solutions (food recipes) that support the upbringing of veganism. Opportunities for students to voluntarily choose only plant-based dishes should be encouraged.

Use of animal products in clothing, footwear, covering materials and hygiene

Students should be taught to take a negative view of the use of animal non-food products: clothing, footwear, cover materials for bags, furniture and car seats, hygiene and perfumery. This applies in particular to the use of these products for decorative purposes, to create tactile, aesthetical and olfactory pleasure. Children need to be taught in detail that obtaining such products follows the suffering and killing of the animals. A negative and eradicable example for students is the use of fur and skin products for decorative purposes. Students should be taught to recognize animal, plant and artificial materials. The use of animal wool as a renewable and relatively non-violent product can be mentioned. It is desirable to introduce a recommendation for students to visit the school using only clothing and footwear that do not contain animal tissues. The aim of upbringing should be the complete abandonment of the use of ingredients of animal origin in these areas.

Use of animals for entertainment

Students must be instilled negative attitudes towards the use of animals for recreation purposes, from pet keeping to hunting.

Pet culture. A case of widespread and reprehensible use of animals for entertainment is pet keeping. Some animal species are considered to be live toys and psychotherapy tools that can entertain, attract children's attention and satisfy parental instincts. People treat pets as things that can be kept on a chain, in a cage or confined space, castrated, thrown out or killed when the owners get tired of them. Pets are usually kept in conditions that are significantly different from wild conditions. Pet keeping differs from animal product consumption only in its relatively non-violent nature. Pet culture is promoted by businesses and individuals whose income is made by selling such animals. Children suffer the most from such propaganda because they like any kind of toy.

Apart from violence to animals, pet culture is a socially negative feature. A part of the limited human attention, time and material resources that need to be devoted to oneself and the people around is constantly wasted aimlessly while playing with animals. Pets are a procreation drive satisfaction factor and tool for females which contributes to the low human birth rate. Additionally, certain anti-social behaviour features can be developed in some young adults being close to helpless and dependent live beings. Nowadays, there is no indispensable practical justification for pet keeping. Populations of animals used and bred earlier for hunting, agriculture, transportation, domestic and aesthetic purposes should be significantly reduced and kept in sanctuaries. Different treatment of pets and food-producing animals creates a contradictory mentality in children. Pets spread infections and parasites. Dogs and other predators may cause serious, even lethal, injuries to people. Pet production overproduces these animals, which is another man-made problem that needs to be addressed by society. The most popular pets are cats and dogs - carnivores, which create additional demand for animal food products. Some pets such as cats pose threats to wildlife.

The desired situation is the complete eradication of pet culture in society. The unethical features and social harmfulness of pet keeping are not yet widely understood and accepted. On the contrary, owning living toys is considered normal and even desirable for children. Schools should change children's attitudes towards pet keeping. Students need to be educated that people must live with people, that all their time, resources and attention need to be devoted to themselves, people around them and other fellow human beings, that animals are not toys. It must be made clear that animals cannot replace humans in any sense. Misleading practices of calling pets "boys" or "girls" should be criticized and discouraged. Students should be informed about pet businesses and their marketing practices.

Hunting and fishing. Intensive and sustained educational work should be carried out to create a particularly negative attitude towards violence against animals for entertainment. This should apply equally to all animal species, starting from insects, to any wildlife activities that do not involve veterinary assistance or prudent non-violent bioregulation.

In particular, it is necessary to fight against such activities as recreational hunting and fishing. Children need to be taught that entertainment cannot be about killing or maiming living and conscious beings, the destruction of wild animals with minimal violence can only be allowed for legitimate epidemiological or safety purposes, people today need to protect themselves and their property from wild animals by non-violent means. It must be taught that the use of firearms against animals is permissible only for self-defence purposes, following the rules for self-defence against humans, including, for instance, warning shots. The use of other animals (such as dogs) in hunting is also reprehensible. An example of an ethically sound approach to hunting is the attitude of indigenous peoples in North America, cf. (Reo et al., 2012). Fishing as a form of recreation must also be condemned, cf. (Balon, 2000).

Entering animal life. Children must be taught that entering any wildlife territory or even territory which is not constantly used by humans, such as forests and agricultural objects, or contacting in any way animals should be considered a violation of animal privacy and should not be practised. As supreme beings, humans should not interfere with the lives of animals for recreational reasons.

Circuses and public zoos. Children need to be instilled a negative attitude against the use of animals for entertainment in outdated facilities such as circuses and recreational public zoos. Collective visits to circus events and zoos for entertainment purposes should not be allowed. Instead, visits to livestock farms are desirable. Negative attitudes towards the use of animals for recreational purposes should be taught, among others, in psychology classes.

Treatment of wild animals living close to humans

There is a need to cultivate less cruel treatment of animals, which people call pests. It must be made clear that negative attitudes towards pests and other animals that cause harm and discomfort to humans are instinctive. Children need to be taught that the negative effects of pests in the past, such as disease spreading, can be prevented today not just by destroying them. People can avoid it, i.e. to protect their health without unduly cruel treatment of animals. Counteracting animals that cause harm or discomfort to humans due to their survival efforts may be limited to proper storage of crops and food, proper organization of agricultural processes, disinfection, cleanliness, proper use of clothing, proper lifestyle and maintenance of the environment. Such skills must be taught in housekeeping and hygiene classes.

Use of animals in unnecessary studies

Students should be provided with information on the brutal use of animals in research and education. Every year, millions of animals are used in in vivo and other scientific research, production research and educational processes. Only part of scientific research using animals can be ethically justified, as there are areas of medical and basic biological research in which drugs are tested on animals, or which uses tissues and other materials that can only be obtained from animals or humans. Some studies that use animals violently are not essential to human health or biological progress. Even violent transfer of wild animals from their natural environment to a research facility for low-value research is not justified. Animals are considered simplified and inexpensive human models that can be used in less important studies when human use is too expensive (Greek et al., 2013). Animals are usually killed after experiments. The right of humans to use animals in experiments, including in vivo, without restriction, is not called into question. Students need to be informed about the lack of justification and ineffectiveness of many experiments (Knight, 2008). There are people who exploit the suffering and death of living beings for their career interests. For research on ethical issues, see (Rogozea et al., 2015). Students should be informed about alternatives to animal testing such as the use of computer tomography, other tissue scanning methods and mathematical modelling.

Positive consequences of vegan upbringing

Vegan upbringing will produce the following positive long-term results. A children's mentality will be formed, in which animals will be considered as organisms with a human-like nervous system and consciousness, empathy for any life will be developed. The number of people who treat animals violently and inhumanely will decrease. Vegan upbringing will have a positive effect on children's attitudes towards violence among humans and interpersonal relationships. The new generations will feel integrated into the global international movement to stop the use of animals.

Conclusions



Our study identified educational steps, activities and subareas that may be important to implement veganism. As described in this article, content of education and the school environment can be modified to support the development of vegan thinking and veganism in society. Vegan thinking can be nurtured by changing the content of appropriate learning units, introducing new skills and competencies, and modifying the school environment. Implementation of the proposed educational changes will not require extra human and material resources. Education and self-education of teachers is necessary.

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Relationship between Childhood Food Experiences and the Use of Restrictions on Consumption of Highly Processed Foods in Adulthood

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Abstract: Consumption of highly processed foods may be determined by social factors, including the family environment. There is still a lack of knowledge on the consumption of highly processed foods in adults in relation to their childhood food experiences. To fill this gap, the aim of the study presented here was to evaluate the relationship between childhood food experiences resulting from parental feeding practices and the use of restrictions on consumption of highly processed foods in adulthood. The cross-sectional study was conducted in 2020/2021 using the CAWI (Computer Assisted Web Interview) method among 702 Polish adults aged 35 and under. The questionnaire included questions from AMoFiC (Adults' Memories of Feeding in Childhood), questions on current use of food restrictions, including highly processed foods, and socio-demographic characteristics. Frequency analysis and cross-tabulations were performed, means and standard deviations were calculated. Pearson's Chi² test and Mann-Whitney's test were used, with an accepted level of significance of $p < 0.05$. About 80% of the study sample declared using restrictions on the consumption of foods, including highly processed foods. The use of restrictions by parents to limit a child's intake of high-fat foods and sweets has shown an association with the use of restrictions in adulthood, including restrictions on the intake of highly processed foods. Low-intensity restriction combined with provision good role models and nutritional knowledge can encourage children to adopt healthy eating behaviors. At the same time, such parental feeding practices may increase the likelihood of reducing consumption of highly processed foods in adulthood.

Keywords: highly processed foods, dietary restrictions, childhood food experiences, adulthood.

Introduction

Sustainable food consumption requires a change in current consumption patterns, including a reduction in the consumption of meat and highly processed foods. Their production poses a serious threat to the environment because of the resources used or the effects accompanying these processes. Restricting or eliminating specific foods from the diet is one of the form of dietary restriction of a qualitative nature (Larson et al., 2002). Dietary restrictions may also be quantitative in nature, i.e. reduction of energy intake (Respondek, 2011). The recommendation to limit the intake of highly processed foods is based on both environmental and health reasons. According to the NOVA food classification, highly/ultra-processed products are of "very low nutritional quality; hyper-palatable and quasi-addictive; imitative of food and falsely seen as healthy; conducive to snacking; aggressively advertised and marketed; and socially and environmentally destructive" (Monteiro et al., 2018). Such foods may also be eliminated from the diet for other reasons, such as by orthorexics who pay obsessive attention to eating foods that are beneficial to health (Mathieu, 2005; Dittfeld et al., 2013).

Consumption of highly processed foods may be notably determined by social factors including but not limited to family (Giovannini et al., 2008). During childhood, children come into contact primarily with people in the family environment, whose involvement in shaping eating behavior can be direct - by providing access to certain foods, and indirect - by shaping attitudes toward food (Jeżewska-Zychowicz, 2000). Social influence can manifest itself through imitation, modeling behavior, and the cult of authority.

Parents interact with their children through the parenting style that can significantly influence the choice of parenting practices used with a child regarding nutrition (Vollmer, 2019). Parents who prefer an authoritative style support and help their child learn about healthy eating, for example by introducing and encouraging the eating of unfamiliar foods. They serve as models for healthy eating and set an example for the child (Shloim et al., 2015; Scaglioni et al., 2018). Parenting style can lead

to high fruit and vegetable intake, higher nutritional value or quality of the diet (Vollmer et al., 2013; Shloim et al., 2015), but also less intake of unhealthy foods, such as sweetened carbonated beverages (Grimm et al., 2004). Parental food choices exert a significant influence on the diets of their children but at the same time children's preferences impact their caregivers' purchasing decisions (Halicka et al., 2021). However, there is a lack of research on the consumption of highly processed foods in adults in relation to their childhood food experiences. Nonetheless, research shows that childhood food experiences may be important in shaping eating styles in adulthood, including the use of restrictions (Puhl et al., 2003).

With this in mind, the aim of the study was to evaluate the association between childhood food experiences resulting from parental feeding practices and the use of restrictions on consumption of highly processed foods in adulthood.

Methodology

The cross-sectional study was conducted between October 2020 and February 2021 using the CAWI (Computer Assisted Web Interview) survey method. Participation in the study was voluntary. Participants provided informed consent to participate in the study. The questionnaire was completed by 778 Polish adults, of which 702 were qualified for the study sample. People aged over 35 were excluded from the analysis due to insufficient numbers of respondents in this group.

Questionnaire

The questionnaire included questions about childhood food experiences resulting from parental feeding practices, current use of dietary restrictions, including those related to consumption of highly processed foods, and questions about socio-demographic characteristics, including gender, age, current and childhood residence, mother's and father's education.

The 39-item AMoFiC (Adults' Memories of Feeding in Childhood) questionnaire developed by Małachowska and Jeżewska-Zychowicz (2021) was used to measure the respondents' food experiences resulted from parental feeding practices. Respondents were asked to report how frequently different situations/family habits took place in their childhood (when they were 7-8 years old), using one of two 6-point scales: 1 – “never”; 2 – “rarely”; 3 – “sometimes”; 4 – “mostly”; 5 – “always”, 6 – „I don't remember” or 1 – “disagree”; 2 – “slightly disagree”; 3 – “neither agree nor disagree”; 4 – “slightly agree”; 5 – agree”; 6 – „I don't remember”, respectively. The answer “I don't remember” has been included to minimize the risk of recall errors.

Behaviors related to consumption of highly processed foods were assessed based on the question "What restrictions do you apply to your food intake?", with the following responses available: I restrict: highly processed products; sweets; high fat products; high sugar products; products containing preservatives, emulsifiers, etc.; other (which?); I do not apply any restrictions. The following coding was used in the analysis: 1/ I limit intake of highly processed products and others, 2/ I limit intake of other products excluding highly processed products, 3/ I do not apply any restrictions.

Statistical analysis

Questions concerning childhood food experiences were assigned to the subscales according to the methodology adopted (Małachowska et al., 2021), and then the Cronbach's alpha reliability coefficient was calculated for each of them (Table 2). The Child Control subscale was excluded from further analyses due to unsatisfactory reliability (Cronbach's alpha <0.7). The response "I don't remember" was considered as missing data. The mean value for each subscale was calculated by summing the scores for each statement from the subscale and then dividing by their number. The resulting scores ranged from 1-5. The higher the score, the more experiences resulted from specific parental feeding practices during childhood.

Frequency analysis and cross-tabulations were performed, means and standard deviations were calculated. Pearson's Chi² test was used, with an accepted level of significance of $p < 0.05$. Mann-Whitney's test was used to compare mean values of each subscale and the use of dietary restrictions in

adulthood. Statistical analysis was conducted using IBM SPSS Statistics for Windows, version 26.0 (IBM Corp, Armonk, NY, USA).

Results and Discussion

Characteristics of the study sample

Characteristics of the study sample are presented in Table 1. The sample consisted of 702 adults, including 428 women and 274 men. Most respondents were 21-24 years old (42%). The mean age was 21.8 years, standard deviation 3.47. Most respondents (43%) now live in large cities (over 250,000 residents). However, in terms of where they lived when they were children, respondents indicated each of the four options in almost equal numbers. Most respondents indicated that their mothers had higher education and their fathers had vocational or primary education, both at 43%.

Table 1

Characteristics of the study sample

Sociodemographic variables		Total	
		Number of respondents (N)	%
Total sample		702	100.0
Gender	Female	428	61.0
	Male	274	39.0
Age	18-20 years old	188	26.8
	21-24 years old	294	41.9
	25-35 years old	220	31.3
Current place of residence	Rural area	127	18.1
	Town with less than 50 000 citizens	118	16.8
	Town with 50 000 – 250 000 citizens	159	22.6
	Town with more than 250 000 citizens	298	42.5
Place of residence in childhood	Rural area	194	27.6
	Town with less than 50 000 citizens	173	24.6
	Town with 50 000 – 250 000 citizens	176	25.2
	Town with more than 250 000 citizens	159	22.6
Mother's education	Vocational or primary	176	25.1
	Secondary	222	31.6
	High	304	43.3
Father's education	Vocational or primary	299	42.6
	Secondary	193	27.5
	High	210	29.9

Childhood food experiences resulting from parental feeding practices

Childhood food experiences most resulted from the parental food practices representing "Healthy eating guidance" (mean value 3.6), followed by "Monitoring" (3.0) and "Pressure and food reward" (2.9). Practices associated with the use of various restrictions towards the child occurred the least frequently (2.0), i.e., answer "rarely" or "slightly" on the scale – Table 2.

Table 2

Subscales and items included in Adults' Memories of Feeding in Childhood (AMoFiC) questionnaire

Subscales and items	Mean ¹⁾ ; SD ²⁾	N Cronbach's alpha Mean ¹⁾ ; SD ²⁾
Restrictions		
My parents took care of me not eating too many high-fat foods	2.7; 1.23	N = 454 0.783 2.0; 0.70
My parents encouraged me to eat less so I won't get fat	2.0; 1.37	
My parents gave me small helpings of food to control my body weight	1.7; 1.07	
My parents discussed with me the nutritional value of foods	2.1; 1.28	
If I ate more at one meal, parents have tried to decrease my food helpings at the next meal	1.5; 0.91	
My parents restricted the foods that would possibly make me gain weight	2.3; 1.36	
My parents believed that there are certain foods that I should not consume to prevent weight gain	2.4; 1.46	
My parents limited sweets/desserts for me in response to bad behavior	2.3; 1.42	
My parents wanted to be sure that I do not eat too much of my favorite foods	2.3; 1.20	
My parents did not allow me to eat between meals because they didn't want me to gain weight	1.8; 1.14	
My parents told me what I can and cannot eat without any explanation (R ³⁾)	1.9; 1.25	
My parents have often put me on a diet to control my weight	1.3; 0.84	
My parents shown me how much they enjoy 'healthy eating'	2.6; 1.33	
Healthy Eating Guidance		
Most of the foods that my parents kept in the house were 'healthy'	3.3; 1.17	N = 569 0.834 3.6; 0.92
My parents involved me in planning family meals	3.0; 1.42	
My parents allowed me to help prepare family meals	4.0; 1.29	
As a child, I had an access to many 'healthy foods' at each meal	3.8; 1.14	
My parents encouraged me to try new foods	4.2; 1.08	
My parents told me that 'healthy food' tastes good	3.7; 1.34	
My parents encouraged me to participate in grocery shopping	3.8; 1.27	
My parents encouraged me to eat a variety of foods	4.1; 1.05	
My parents modelled healthy eating for me by eating healthy foods themselves	2.6; 1.32	
Pressure and Food Reward		
My parents always insisted on finishing everything I had on the plate	2.9; 1.46	N = 564 0.714 2.9; 0.92
My parents offered me my favorite foods in exchange for good behavior	2.7; 1.44	
My parents offered me sweets as a reward for good behavior	2.6; 1.40	
My parents insisted that I eat even though I told them that I'm not hungry	2.8; 1.50	
If I ate a small helping, my parents tried to get me to eat more	3.5; 1.33	
After finishing a meal, my parents tried to get me to eat more, even a bite of food	2.7; 1.45	
Monitoring		
Did your parents pay attention to the sweets that you were eating as a child?	3.1; 1.16	N = 576 0.836 3.0; 0.98
Did your parents pay attention to the salty snacks that you were eating as a child?	3.1; 1.19	
Did your parents pay attention to the high-fat foods that you were eating as a child?	2.5; 1.19	

Did your parents pay attention to the sugary drinks that you were drinking as a child?	3.2; 1.35	
Did your parents encourage you to eat healthy foods before unhealthy ones?	3.0; 1.39	
Child Control		
Did your parents let you consume everything you wanted?	3.4; 1.11	N = 513 0.591 3.0; 0.71
Did your parents let you choose the foods you wanted from what was being served for dinner?	2.5; 1.41	
Did your parents give you something to eat or drink as a first thing when you got fussy?	2.1; 1.05	
Did your parents make something else when you did not like what was being served?	2.9; 1.29	
Did you have an access to snacks throughout the day?	3.6; 1.20	
Did your parents allow you to leave the table when you were full even when the rest of the family was not done eating?	3.7; 1.35	

¹⁾Mean value based on the 5-point scales: 1- “never”/”disagree”; 2- “rarely”/”slightly disagree”; 3- “sometimes”/”neither agree nor disagree”; 4- “mostly”/”slightly agree”; 5- “always”/”agree”;

²⁾SD - standard deviation; ³⁾R – scores were reverse coded.

The use of food restrictions in adulthood

Over 40% of the survey sample (41.9%) reported using restrictions on eating highly processed foods, and slightly less 38.2% reported using other restrictions. Thus, one in five did not apply any restrictions (Table 3). Significantly more women (50.2%) than men (28.8%) followed restrictions on eating highly processed foods, also more people whose fathers had at most vocational education (45.2%) or higher education (46.2%) than people whose fathers had secondary education (32.1%). An inverse relationship was observed in the case of restrictions on the consumption of foods other than processed foods. They were applied by more men than women and by more persons whose fathers had secondary education. Place of residence, both current and in childhood, age and mother's education did not differentiate the declarations regarding the use of food restrictions.

Table 3

Use of food restrictions with consideration of socio-demographic characteristics (%)

Sociodemographic characteristics		Restrictions on eating:		
		highly processed food and others	other than highly processed food	without restrictions
Total sample		41.9	38.2	19.9
Gender (p<0.001)	Female	50.2	35.0	14.7
	Male	28.8	43.1	28.1
Current place of residence (p=0.931)	Rural area	44.6	36.2	19.1
	Town < 50 000 citizens	39.6	39.6	20.8
	Town with 50 000–250 000 citizens	41.5	38.1	20.3
	Town > 250 000 citizens	38.6	40.9	20.5
Place of residence in childhood (p=0.231)	Rural area	42.8	39.7	17.5
	Town < 50 000 citizens	48.0	34.7	17.3
	Town with 50 000 – 250 000 citizens	42.1	36.9	21.0
	Town > 250 000 citizens	34.0	41.5	24.5
Age (p=0.079)	18-22 years old	34.6	40.4	25.0
	23-30 years old	42.5	39.5	18.0
	31-55 years old	47.3	34.5	18.2

Mother's education (p=0.409)	Vocational or primary	45.5	37.5	17.0
	Secondary	36.9	40.6	22.5
	High	43.5	36.8	19.7
Father's education (p=0.027)	Vocational or primary	45.2	36.7	18.1
	Secondary	32.1	43.0	24.9
	High	46.2	35.7	18.1

Results showing frequent use of restrictions are confirmed by other studies as well (Bernstein et al., 2010). Among other than highly processed food, there were foods produced with the use of advanced technologies. Such foods are also often characterized by a high degree of processing (i.e. sweets, high fat products; high sugar products; products containing preservatives, emulsifiers, etc.). Nevertheless, the attention paid to the production process in the name of the food ("highly processed") was intended to highlight the production method as significantly interfering with both the final form of the product and the environment.

Only childhood eating experiences related to parental use of various restrictions on the child differentiated the use of eating restrictions in adulthood. Those who currently follow restrictions on their food intake, both highly processed and other foods, scored higher on the Restrictions scale compared to those not using any restrictions (Table 4).

Table 4

Use of food restrictions in accordance to childhood experiences (%)

Subscales	Restrictions on eating:		
	highly processed food and others	other than highly processed food	without restrictions
Restrictions	2.1 ^a ; 0.75	2.0 ^a ; 0.69	1.8 ^b ; 0.60
Healthy Eating Guidance	3.6 ^a ; 0.90	3.6 ^a ; 0.77	3.6 ^a ; 0.70
Pressure and Food Reward	2.9 ^a ; 0.90	2.8 ^a ; 0.82	2.9 ^a ; 0.97
Monitoring	3.0 ^a ; 1.05	3.1 ^a ; 0.94	2.9 ^a ; 0.92

^{a,b} Different superscripts indicate significantly different means following Mann-Whitney's test

A higher score on Restrictions subscale was associated with the presence of restrictions in adulthood, both on highly processed foods and on other foods. Restrictions in childhood (regarding high-fat foods, foods making gain weight, sweets, snacking and large portions of food) can therefore be considered as learned practices applied in adulthood that may protect against excessive consumption, including high-energy and highly processed foods. However, the study did not assess current food consumption, so confirmation of this assumption requires further research.

However, among the 13 items from the Restrictions subscale there are also statements describing parents' educational activities (discussion on the nutritional value of foods and information on foods that may be eaten) and a statement on the modelling effect (showing ways to enjoy "healthy eating"). Research among children shows that modelling their diets through behaviors such as increasing the availability of adequate foods or limiting unhealthy foods was positively related to healthy eating behaviors such as high fruit and vegetable consumption and negatively correlated with consumption of high-sugar beverages, salty snacks as well as sweets. Children of parents who emphasize nutrition education, encourage dietary diversity and model eating behaviors, as well as involve the child in food-related activities (e.g. food choice, meal preparation) were characterized by favorable eating behaviors (Warkentin et al., 2016). Our results indicate that the use of restrictions, combined with the provision of nutritional knowledge as well as modelling, can be considered a predictor of using food restriction in adulthood, including highly processed foods. Although the use of restrictions in childhood was described as rare, their effect in adulthood was confirmed.

Research to date suggests that practices inducing the child to consume particular foods had an impact on reducing their consumption, as well as increasing aversion to them (Frankel et al., 2012). When children experience restricted access to food, they display increased intake when restrictions are lifted

(Tapper, 2017). In addition, research suggests (Birch et al., 2003) that high levels of dietary restriction aimed at controlling child weight have the effect of reducing self-regulation in eating, which may indirectly contribute to increased food intake and consequently excessive body weight. A number of studies (Birch et al., 2003; Gregory et al., 2010) also indicate that children exposed to high levels of restriction tended to exhibit adverse eating behaviors such as emotional eating, reduced fruit and vegetable intake and higher frequency of salty snack consumption. Thus, restrictive practices cannot be recommended to parents as effective in counteracting high consumption of certain foods in adulthood. On the other hand, the results of our study suggest that low-intensity of restrictive practices accompanied by parental modelling of children's behavior by providing correct role models and adequate knowledge may be conducive to limiting the intake of highly processed foods in adulthood.

No association was found between the use of dietary restrictions in adulthood and childhood experiences as a result of parental feeding practices included in the Healthy Eating Guidance and Pressure and Food Reward subscales. Previous research suggests that greater intensity of these latter practices might favor higher intake of sweets and salty snacks. Moreover, forced consumption in response to fussy eating may persist into adulthood, leading to lower intake of favorable foods and higher intake of unfavorable foods (Ellis et al., 2016; Batsell et al., 2002). But it has also been shown that monitoring a child's behavior was associated with higher consumption of fresh fruit and vegetables (Warkentin et al., 2016).

The study has some limitations, including the fact that it relies on retrospective self-reports that may have been biased, for example by imprecise recollections (Williams et al., 2017). Moreover, the cross-sectional design of this study does not allow to find a causal relationship. The data were collected among Polish adults, hence the results cannot be generalized to other populations due to differences related to ethnicity or socioeconomic status. The study is also limited by the low age diversity of the study group.

Conclusions

The survey in Polish young adults found that:

- Approximately 80% of the study sample declared using restrictions on the consumption of foods, including highly processed foods.
- Parents' using restrictions to limit a child's food intake of high-fat foods and sweets showed an association with the use of restrictions in adulthood, including restrictions on highly processed foods intake.
- Low intensity restrictions combined with modelling of child behavior (e.g. providing good role models or nutritional knowledge) should be used by parents to encourage healthy eating behavior in their children. At the same time, such parenting feeding practices may increase the likelihood of limiting the consumption of highly processed foods in adulthood.

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Primary School Students' Self-Concept in Mathematics and Science: Findings from TIMSS 2019

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Abstract: A self-concept is an important construct that has been associated not only with academic achievement but with success in life in general. The self-concept can be general and domain specific. It is believed that by the end of Grade 4 students' understanding about their abilities is close to reality. Besides, by increasing the individuals' domain specific self-concept, also the achievement increases and vice versa. In this research, the authors explored the influencing factors of 4th graders' self-concept in Mathematics and Science from the IEA's TIMSS 2019 study. The factors were selected from the students' and parents' questionnaires. As the self-concept is typically associated with achievement, the students' achievement in Mathematics and Science was used as a reference. The purpose for this study was to examine whether achievement has the main influence on students' self-concept in Mathematics and Science and to find out other influencing factors. The research question was as follows: what factors influence the 4th grade students' self-concept in Mathematics and the students' self-concept in Science in the IEA's TIMSS 2019 study? The authors used a correlation and linear regression analysis to process the data from 8 countries around the Baltic Sea: Latvia, Lithuania, Poland, Germany, Denmark, Sweden, Finland, and the Russian Federation. The findings revealed that students' liking for the school subject was a more significant factor for students' self-concept in Mathematics and Science than their achievement. The achievement was only the second most influencing factor. It was discovered that students with higher self-concept understood their teachers better and were bullied less than their peers with lower self-concept in the domain subject.

Keywords: student's self-concept, academic self-concept, achievement, TIMSS.

Introduction

Sustainable development starts at the level of individual person (Fergusson et al., 2021) that is why sustainable development can't be viewed without education as one of the main instruments that is used to influence the human mind. Some authors even argue that Science, Technology, Engineering and Mathematics (STEM) education together with design and technology curriculum could provide the necessary bridge between sustainable development and education (Pitt, 2009). None can doubt that last decades had changed not only the way how we understand the education, but education itself and the curriculum. As educational curriculum and educational environment had significantly changed, it becomes more and more important to analyse the factors that influence a child's wellbeing in different educational environments and ability to learn successfully. Previous studies from the International Association for the Evaluation of Educational Achievement (IEA) had shown the importance of home and school factors on student's academic achievement (Mihno, 2015; Geske et al., 2020; Mullis et al., 2020), that is – on students' success at the school, as well as on students' academic self-concept in reading (Geske et al., 2021a; Geske et al., 2021b).

In the literature the term self-concept is widely defined, but most authors agree that it is a structured belief system, that a person has about oneself and that this belief system can be or not be related to reality (Berk, 2009; Pervin et al., 2013; Larsen et al., 2018). Academic self-concept is the belief one has about his/her academic success based on previous experience (Bong et al., 2003). For the purpose of this research authors assume that this belief system can be measured at the end of 4th grade as Bjorklund (Bjorklund, 2000) emphasizes that this is the age when it comes close to reality.

As academic self-concept is reciprocal in nature with the achievement of the academic domain (Pervin et al., 2013), and academic self-concept itself is one of the main predictors for achievement (Vesić et al., 2021), the authors selected the factors that could influence the academic self-concept because they were found to influence the academic achievement or self-concept in other studies (Denissen et al., 2007; Vesić et al., 2021): tiredness, absentness from the school, bullying, previous education

experiences, liking of the subject, engagement and the instructional quality of the teacher. Additionally, the authors decided to analyse whether or not an extra classes with a purpose to excel the overall class level could influence the students' self-concept in Mathematics or Science. The purpose for this study is to select the factors that influence the student's self-concept in Mathematics and Science and to analyse linear influence from these factors.

Methodology

The authors analysed the data from the TIMSS 2019 study, exploring the questionnaire of 4th graders and their parents, first, to find what factors from the students' and parents' questionnaires impacted the students' self-concept in Mathematics and Science, and second, to search for an explanation whether these factors impacted on the students' self-concept linearly in each domain. TIMSS 2019 was the seventh cycle of TIMSS Assessment. In total, approximately 330000 students of their fourth formal year of schooling and 310000 parents from 64 countries participated in the study. For every country the sample was representative and consisted of around 4000 students and their parents, 150 to 200 schools with Mathematics and Science teachers of the sampled classes.

Students were sampled in two stages: the first stage included the selection of schools with stratified random sampling methods; the second stage included the selection of a class or classes within the sampled school with random sampling methods. From every participant school one to three classes were sampled. Besides, all students of the sampled class were included in the sample, except for students with severe disabilities which prevented these students from ability to read, write or understand.

The Baltic Sea region countries, Latvia, Lithuania, Denmark, Finland, Germany, Sweden, and the Russian Federation, were chosen to compare the findings. These countries are located around the Baltic Sea, all of them apart from the Russian Federation belong to the European Union. The Russian Federation was included in the list of countries for comparison due to its historical similarities in educational system and traditions with Latvia and Lithuania. There were many Russian-speaking schools in Latvia and Lithuania which participated in the TIMSS 2019 study.

The purpose for this study was to find the factors that had a significant impact on students' domain specific self-concept. The data of each domain subject, that is, Mathematics and Science lessons for Grade 4, were analysed separately, thus the procedure was performed twice. First, the authors performed a correlation analysis to distinguish significant factors, then a liner regression analysis was done with identified significant factors. In the linear regression analysis, the students' self-concept in Mathematics and Science were chosen as the dependent variables, whereas independent variables were the following: tiredness, absentness, bullying, extra classes, early literacy, and numeracy tasks, liking for the domain subject (Mathematics, Science), engagement and achievement in the domain lessons.

In the TIMSS 2019 study, the students' self-concept was measured by Student Confident in the domain scale. This scale was constructed from the question of students' questionnaire "How much do you agree with these statements about <domain>?", followed by nine statement items for Mathematics and seven statement items for Science that were measured in the Likert-type scale. For Student Confident in Mathematics scale four statement items were coded directly and five – reverse coded. If the statement item was coded directly, then an answer "Agree a lot" got 1 point, "Agree a little" got 2 points; "Disagree a little" got 3 points and "Disagree a lot" got 4 points. If the answer was reverse coded, then "Agree a lot" got 4 points and "Disagree a lot" got 1 point. The statements for the Student Confident in domain subject were as follows (Yin et al., 2020): 1) I usually do well in <domain subject>, 2) <Domain subject> is more difficult for me than for many of my classmates (Reverse coded), 3) <Domain subject> is not one of my strengths (Reverse coded), 4) I learn things quickly in <domain subject>, 5) Mathematics makes me nervous (Reverse coded) (just for Confident in Mathematics scale), 6) My teacher tells me I am good at <domain subject>, 7) <Domain subject> is harder for me than any other subject (Reverse coded), 8) <Domain subject> makes me confused (Reverse coded), 9) I am good at working out difficult mathematics problems (just for Confident in Mathematics scale). For Student Confident in Mathematics scale and for Student Confident in Science scale the Cronbach's Alpha Reliability Coefficient for the countries of comparison varied from 0.86 to 0.90.

The students' tiredness was measured with a question from students' questionnaire: "How often do you feel this way when you arrive at school?". The student could mark one of the following responses: "Every day" (1 point), "Almost every day" (2 points), "Sometimes" (3 points) or "Never" (4 points).

The students' absentness was measured with a question from students' questionnaire: "About how often are you absent from school?". The students could mark one of the following responses: "Once a week" (1 point), "Once every two weeks" (2 points), "Once a month" (3 points), "Once every two months" (4 points) or "Never or almost never" (5 points).

The bullying was measured with the Student Bullying scale, which was created on the basis of students' responses to the questions "During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet?" and its 14 statements. All statements were measured in the four-item scale: "Never" (1 point), "A few times a year" (2 points), "Once or twice a month" (3 points) and "At least once a week" (4 points). All statements of this scale were as follows (Yin et.al., 2020): 1) Said mean things about my physical appearance (e.g., my hair, my size), 2) Spread lies about me, 3) Shared my secrets with others, 4) Refused to talk to me, 5) Insulted a member of my family, 6) Stole something from me, 7) Made me do things I didn't want to do, 8) Sent me nasty or hurtful messages online, 9) Shared nasty or hurtful things about me online, 10) Shared embarrassing photos of me online, 11) Threatened me, 12) Physically hurt me, 13) Excluded me from their group (e.g., parties, messaging), 14) Damaged something of mine on purpose. The Cronbach's Alpha Reliability Coefficient for the countries of comparison varied from 0.81 to 0.85.

The authors of this study chose to analyse whether there could be any impact on students' self-concept if one attended extra lessons, examining a question from the parents' questionnaire: "During the last 12 months, has your child attended extra lessons or tutoring not provided by the school in the following subjects?". Parents could point out that their child had attended extra classes in Mathematics and/or Science by marking one of the provided answers: "Yes, to excel in class", coded into a new variable to exclude other two options, "Yes, to keep up in class" and "No".

There were three scales in the TIMSS 2019 that measured ability to do school tasks before beginning of school. These scales were "Could Do Literacy Tasks When Beginning Primary School", "Could Do Numeracy Tasks When Beginning Primary School" and "Could Do Literacy and Numeracy Tasks When Beginning Primary School". In order to find any impact on students' self-concept, the authors chose to analyse the third scale. This scale was constructed from three questions in the parents' questionnaire. The first question "How well could your child do the following when he/she began the first grade of primary school?", followed by seven statements that were measured in the Likert-type scale from "Very well" (1 point) to "Not at all" (4 points). These statements were as follows (Yin et.al., 2020): 1) Recognize most of the letters of the alphabet, 2) Read some words, 3) Read sentences, 4) Read a story, 5) Write letters of the alphabet, 6) Write his/her name, 7) Write words other than his/her name. The second question was "Could your child do the following when he/she began the first grade of primary school?", followed by three statements that were measured in a four-item scale: "Up to 100 or higher" (1 point), "Up to 20" (2 points), "Up to 10" (3 points) and "Not at all" (4 points). The statements of this question were as follows (Yin et.al., 2020): 1) Count by himself/herself, 2) Recognize written numbers, 3) Write numbers. The third question was "Could your child do the following when he/she began the first grade of primary school?", followed by two statements that were measured with "Yes" (1 point) and "No" (2 points). The two statements of this question were as follows: 1) Do simple addition 2) Do simple subtraction. The Cronbach's Alpha Reliability Coefficient for the countries of comparison varied from 0.88 to 0.91.

To find whether there was any correlation between students' self-concept and liking for the domain subject, the authors used two scales "Students Like Learning Mathematics" and "Students Like Learning Science". Both scales were constructed from the question in the students' questionnaire "How much do you agree with these statements about learning <domain subject>?". Both questions had nine statements were students indicated the answer in the Likert-type scale from "Agree a lot" (1 point) to "Disagree a lot" (4 points). Some items in both scales were coded reversely. The items were as follows (Yin et.al., 2020): 1) I enjoy learning <domain subject>, 2) I wish I did not have to study <domain subject> (Reverse coded), 3) <Domain subject> is boring (Reverse coded), 4) I learn many

interesting things in <domain subject>, 5) I like <domain subject>, 6) I look forward to learning science in school/I look forward to mathematics lessons, 7) Science teaches me how things in the world work/I like to solve mathematics problems, 8) I like to do science experiments/I like any schoolwork that involves numbers, 9) <domain subject> is one of my favorite subjects. The Cronbach's Alpha Reliability Coefficient for the countries of comparison varied from 0.90 to 0.94 for Mathematics and from 0.88 to 0.93 for Science.

Alongside liking for the domain subject, students' engagement was another important factor that predicted their achievement, but in order to find out whether the engagement was important for students' self-concept, this study included the "Instructional Clarity in <domain subject> Lessons Scale". The authors assumed that if the teacher's instructions were understandable for a child, then the child could engage in the lesson, whereas less clear instructions lowered students' engagement in lessons. The students could indicate their opinion by choosing one option in the Likert-type scale from "Agree a lot" (1 point) to "Disagree a lot" (4 points). There were six statements related to the clarity of teachers' instructions. They were as follows (Yin et.al., 2020): 1) I know what my teacher expects me to do, 2) My teacher is easy to understand, 3) My teacher has clear answers to my questions, 4) My teacher is good at explaining <domain subject>, 5) My teacher does a variety of things to help us learn, 6) My teacher explains a topic again when we don't understand. The Cronbach's Alpha Reliability Coefficient for the countries of comparison varied from 0.71 to 0.82 for Mathematics and from 0.76 to 0.83 for Science.

Based on the findings from the studies reviewed in the introduction, the authors created a new scale based on the statements that were included in the "Instructional Clarity in <domain subject> Lessons Scale" and "Students Like Learning <domain subject> Scale", they named this as "Engagement in the <domain subject> Scale". The students could indicate their opinion by choosing one option in the Likert-type scale from "Agree a lot" (1 point) to "Disagree a lot" (4 points). Statements that were included in the scale were as follows: 1) I know what my teacher expects me to do, 2) My teacher is easy to understand, 3) My teacher does a variety of things to help us learn, 4) I enjoy learning <domain subject>, 5) I learn many interesting things in <domain subject>. The Cronbach's Alpha Reliability Coefficient for the countries of comparison was 0.73 for Mathematics and 0.78 for Science.

The authors of this article performed data analysis in two parts: first, the correlation analysis was performed to find out the factors that had significant correlations. The second part consisted of linear regression models. In the linear regression models, the authors used the students' self-concept in the domain subject as a dependent variable but all other factors as independent variables.

Results and Discussion

The correlations between students' self-concept in Mathematics, Science and all other factors, including achievement, are summarised in Table 1.

Table 1

Correlations of Students' Self-Concept in Mathematics and Students' Self-Concept in Science with Eight Other Factors and Achievement

Country		Latvia	Denmark	Finland	Germany	Lithuania	Poland	Russian Federatio	Sweden
Name of the factor									
Extra classes to excel in class	M	0.04	0.04	-0.10	-0.08	0.07	0.05	0.04	0.00
	S	0.01	-0.02	-0.03	-0.01	-0.03	0.03	0.02	-0.02
Tired at school	M	0.11	0.10	0.14	0.15	0.11	0.13	0.11	0.12
	S	0.06	0.06	0.07	0.14	0.05	0.10	0.11	0.11
Absent from school	M	0.20	0.19	0.23	0.16	0.19	0.17	0.18	0.26
	S	0.16	0.06	0.23	0.14	0.19	0.10	0.17	0.18
Student bullying	M	0.14	0.17	0.18	0.14	0.17	0.10	0.17	0.18
	S	0.17	0.11	0.15	0.14	0.13	0.08	0.19	0.15

Country		Latvia	Denmark	Finland	Germany	Lithuania	Poland	Russian Federatio	Sweden
Early literacy and numeracy tasks	M	0.20	0.14	0.22	0.14	0.28	0.17	0.20	0.24
	S	0.08	0.05	0.09	0.04	0.17	0.11	0.15	0.11
Engagement in the domain subject lessons	M	0.50	0.56	0.51	0.50	0.49	0.54	0.43	0.52
	S	0.54	0.62	0.53	0.55	0.53	0.60	0.48	0.59
Student likes learning the domain subject	M	0.63	0.63	0.64	0.66	0.63	0.61	0.60	0.61
	S	0.64	0.68	0.60	0.63	0.64	0.66	0.60	0.65
Domain subject teacher's instructional clarity	M	0.33	0.45	0.36	0.33	0.30	0.47	0.28	0.39
	S	0.44	0.53	0.40	0.43	0.41	0.54	0.35	0.48
Achievement in the domain subject	M	0.51	0.47	0.43	0.47	0.48	0.45	0.38	0.36
	S	0.21	0.26	0.20	0.33	0.25	0.22	0.18	0.19

M – Mathematics, S – Science. All correlations are significant with $p < 0.05$ or less.

All values in Table 1 are significant at the level of $p < 0.05$. As one can see in Table 1, the strongest correlation for all countries of comparison was between students' self-concept in the domain subject and the fact that they liked the subject. The second strongest correlation between students' self-concept in Mathematics was with achievement in Mathematics in Latvia, but for other countries of comparison, the second strongest correlation was between the engagement in Mathematics lessons and students' self-concept in Mathematics. The second strongest correlation for all countries of comparison was between the engagement in Science lessons and the students' self-concept in Science. The Mathematics achievement variable correlated with the students' self-concept in Mathematics as the third strongest in Denmark, Finland, Germany, Lithuania, and the Russian Federation, whereas in Poland and Sweden the third strongest correlation was between the students' self-concept in Mathematics and the instructional clarity of teachers in Mathematics. In Latvia, the third strongest correlation was between the students' self-concept in Mathematics and their engagement in Mathematics lessons. The third strongest correlation with students' self-concept in Science was the teachers' instructional clarity for all countries of comparison.

From Table 1 it can be seen that not being tired, not being absent from school and being able to perform early literacy and numeracy tasks correlated more with self-concept in Mathematics than in Science. Whereas students that were bullied showed less correlation with the self-concept in Science but more in Mathematics. Table 1 shows that when engaging students in extra classes to exceed the class level negatively correlated with the students' self-concept in Mathematics in Finland and Germany, whereas students' self-concept in Science negatively correlated with extra classes for exceeding the class level in Science for Denmark, Finland, Germany, Lithuania and Sweden. In order to explain these negative correlations, one should know better the culture of these countries, but in Latvia these usually are special clubs and extra-curricular classes for talented students to prepare them for competitions in the domain subject.

The authors chose to analyse the factor linearity in two steps: first, all factors, except top three to exclude the influence from these on the students' self-concept in the domain subject and, second, all factors together to distinguish the ones that influenced the students' self-concept the most. It was done because it is widely researched and described in the literature that achievement and self-concept are reciprocal in nature. Moreover, Table 1 presented the factor "Student Like Learning the Domain Subject" and the factor "Engagement in the Domain Subject Lessons" had the strongest correlation with the students' self-concept in the domain subject. First, the authors built the linear regression model with six variables where the students' self-concept in the domain subject was dependent variable and the following six variables were independent ones: "Tiredness", "Absentness", "Bullying", "Extra classes" and "Early tasks". The result of this linear regression model is summarised in Table 2.

Table 2

Coefficient of Determination (R^2) for Linear Regression Model of Six Regression Equations Representing How Self-Concept in Mathematics and Science Is Affected by the Selected Factors

Country		Latvia	Denmark	Finland	Germany	Lithuania	Poland	Russian Federation	Sweden
R^2	M	0.17	0.24	0.21	0.16	0.18	0.26	0.15	0.24
R^2	S	0.22	0.28	0.19	0.21	0.21	0.31	0.18	0.26

M – Mathematics, S – Science

As it can be seen in Table 2, the linear regression model explains better the students' self-concept in Science than in Mathematics. The mean average value for Mathematics is 0.20 but for Science – 0.23, it means that this model explains about 20% to 23% of the variance of students' self-concept in the domain subject.

In order to increase the explained variance of students' self-concept in Science and Mathematics, the authors added all other variables as independent together with achievement in the domain subject. In Table 3 one can see 10 linear regression equations where students' self-concept in the domain subject is a dependent variable, but "Tiredness", "Absentness", "Bullying", "Extra classes", "Early tasks", "Engagement in the Domain Subject Lessons", "Student Like Learning the Domain Subject", "Domain Subject Teachers' Instructional Clarity" and "Achievement in the Domain Subject" as independent variables together with a coefficient of determination for this model.

Table 3

Linear Regression Coefficients of Ten Regression Equations Representing How Students' Self-Concept in Mathematics and Science Is Affected by the Selected Factor and Coefficient of Determination (R^2) for This Linear Regression Model

Country		Latvia	Denmark	Finland	Germany	Lithuania	Poland	Russian Federation	Sweden
Extra classes to excel in class	M	0.01	0.03	-0.02	-0.03	0.01	0.02	0.02	-0.02
	S	-0.02	-0.02	0.00	-0.01	-0.02	0.01	0.01	-0.02
Tired at school	M	0.02	0.00	0.04*	0.03	0.00	0.01	0.01	0.02
	S	0.02	0.01	0.02	0.05*	-0.02	0.04*	0.02*	0.05*
Absent from school	M	0.03*	0.02	0.01	-0.02	0.03*	0.00	0.05*	0.06*
	S	0.02	0.00	0.06*	0.05*	0.05*	-0.01	0.02*	0.06*
Instructional clarity	M	0.06*	0.14*	0.16*	0.11*	0.04	0.22*	0.05*	0.17*
	S	0.11*	0.13*	0.14*	0.13*	0.08*	0.13*	0.02	0.17*
Student bullying	M	0.02	0.02	0.04*	0.02	0.02	0.01	0.04*	0.02
	S	0.04*	0.02	0.06*	0.03	-0.01	0.02	0.07*	0.01
Student Like Learning the Domain Subject	M	0.51*	0.47*	0.58*	0.62*	0.52*	0.45*	0.54*	0.52*
	S	0.51*	0.49*	0.53*	0.50*	0.52*	0.49*	0.51*	0.51*
Early literacy and numeracy tasks	M	0.02	0.00	0.06*	0.02	0.07*	0.01	0.10*	0.08*
	S	0.03*	0.01	0.05*	0.01	0.08*	0.04*	0.12*	0.04*

Country		Latvia	Denmark	Finland	Germany	Lithuania	Poland	Russian Federation	Sweden
		Name of the factor							
Achievement in the domain subject	M	0.36*	0.36*	0.28*	0.34*	0.37*	0.33*	0.24*	0.26*
	S	0.16*	0.17*	0.15*	0.23*	0.18*	0.16*	0.11*	0.14*
Engagement in the domain subject lessons	M	-0.01	0.02	-0.09*	-0.12*	0.05	-0.05	-0.03	-0.04
	S	0.08*	0.11*	0.01	0.02	0.09*	0.10*	0.09*	0.05
R ²	M	0,54*	0,55*	0,53*	0,56*	0,57*	0,50*	0,46*	0,50*
R ²	S	0,46*	0,52*	0,43*	0,47*	0,48*	0,50*	0,42*	0,50*

M – Mathematics, S – Science, * Significant, $p < 0.05$

Standardized regression coefficient statistically significant for confidence interval of 95%

As it can be seen in Table 3, the linear regression model explains on average 53% of variance from students' self-concept in Mathematics and 47% of variance from students' self-concept in Science. The strongest linearity exists between student liking for the domain subject and the students' self-concept, as well as with achievement in the domain subject and the students' self-concept; the third most linearly related variable was the clarity of instructions for the subject and the students' self-concept. Only in Lithuania the clarity of instructions was not significant for students' self-concept in Mathematics, and in the Russian Federation the clarity of instructions was not significant for students' self-concept in Science. For all countries of comparison, the attendance of extra lessons to excel in class was not significant for the students' self-concept in the domain subject. Surprisingly, the fact that students were engaged in Mathematics lessons was not significant for all countries of comparison and was negative in Finland and Germany. The linear regression coefficient for students' self-concept in Science was significant for the engagement in Science lessons in Latvia, Denmark, Lithuania, Poland and the Russian Federation, but in Finland, Germany and Sweden this coefficient was not significant. Only in Finland and the Russian Federation, a significant linearity was shown between the students being bullied and self-concept in Mathematics, but the self-concept in Science was significant in Latvia, Finland and the Russian Federation. Besides, the ability to perform early literacy tasks before beginning of school very little but significantly impacted on the students' self-concept in Science for Latvia, Finland, Lithuania, Poland, the Russian Federation and Sweden, but the self-concept in Mathematics as a variable was not significant for Latvia, Denmark, Germany and Poland. For other countries of comparison, the impact was small but significant. The fact that students were not tired at school and were not absent from school impacted more on students' self-concept in Science rather than in Mathematics. However, it was discovered that not being absent was more significant rather than not being tired, although these variables impacted on the students' self-concept in the domain subject very little. Only in Denmark there was a significant linearity for students' self-concept in Mathematics and not being tired.

Conclusions

As it has been described in other research papers, the students' self-concept in the domain is linearly related with the achievement and they are reciprocal in nature. In this study the authors discovered that both the self-concept in Mathematics and the self-concept in Science were more influenced by the students' liking for the subject rather than by the achievement itself, i.e., the students who liked Mathematics and/or Science had higher self-concept in Mathematics and/or Science and/or vice versa. Also, it was identified that students who understood their teachers' instructions had higher self-concept in the domain subject in comparison with their peers who did not clearly understand their teachers' instructions. The authors were surprised that the engagement in the domain subject lessons correlated a lot with students' self-concept, but it had no significance or even had a negative effect in the linear regression model when the achievement was included. This fact needs to be studied in detail to explore possible causes and effects. Besides, there is a need for further studies to find out whether

the fact that students like learning the subject is reciprocal in nature with the self-concept in the same way as the achievement in the domain subject and the self-concept in this subject.

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Challenges of Implementing Inclusive Education: Evidence from Selected Developing Countries

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Abstract: Inclusive education is deemed to be a lofty goal that every nation should strive to achieve. It helps people living with disabilities and people without any disabilities to have equal access to educational materials, resources, and training without any discrimination. Therefore, international advocates and governments have made conscious efforts to achieve inclusive education. However, the implementation of inclusive education and its related policies is difficult, especially in developing countries. The lofty inclusive education is challenging and almost impossible to achieve. This paper, therefore, aims to assess and highlight the challenges frustrating the implementation of inclusive education, particularly in developing countries. It is obvious that these countries are lagging behind in the achievement of inclusive education due to a wide range of challenges identified in this study. To achieve this aim, the paper employed a theoretical research method. The method allowed several extant studies, especially those published in mainstream journals, on the subject to be reviewed and explored extensively. The review of extant studies on the challenges encountered in the implementation of inclusive education produced a number of pertinent findings. So, the findings of the study revealed that societal attitude towards people living with disabilities, poor attitude of the government, inadequate infrastructure, poor funding, and a host of other reasons are the key factors frustrating the implementation of inclusive education, causing the low level of inclusiveness in the developing nations. These findings help inclusive education advocates, international organizations, and governments alike, to narrow their focus on these challenges and develop approaches to overcome them in order to achieve their end goal of inclusive education. It is therefore suggested that government should organize training programmes for teachers and headteachers on how best to manage an inclusive classroom and offer inclusive education.

Keywords: challenges, inclusive education, implementation, people, Developing Countries.

Introduction

Inclusive education has grown over the years in popularity among nations, developing and developed nations, and international organisations. Its importance stems from its focus on how people living with disabilities can have equal access to education and educational resources like any other person who has no disabilities in society. Some studies even proved that it holds the key to eradicating societal biases and discrimination among the young ones and fostering an inclusive future for the society (Begum, 2017).

In the literature, disabilities are part of human conditions, and it is expected that many people will experience some physical disabilities or impairments in their bodies during their lifetime (Uromi and Mazagwa, 2014). A disability may be temporary or permanent (Altiraifi, 2019). But once an individual suffers a disability, it makes his living conditions difficult in one way or the other. While some forms of disabilities may not necessarily alter the living condition of people, some do make people invalid, relying on other people to live a proper life. Disability somewhat limits what people living with disabilities can do and the places they can go to. And by so doing, they are unable to access existing opportunities without the help of other people. In Uromi and Mazagwa (2014), they traced the causes of disabilities to infectious, non-infectious, and communicable diseases such as malaria, epilepsies, meningitis, tuberculosis, and parasitic health problems. In some cases, people become disabled because of congenital diseases and through war, hostility, accidents, and trauma (Sareen, 2014; Finlay, Owens, Taylor, Nash, Capdarest-Arest, Rosenthal, Blue-Howells, Clark and Timko, 2019). Generally, disability poses some challenges to people experiencing it. Uromi and Mazagwa (2014) highlighted some of the challenges bedevilling people living with disabilities. These challenges include the poor level of infrastructure that makes it difficult for people living with disabilities to access some areas; discrimination regarding employment opportunities and women with disabilities experience more

discrimination in this area; economic exclusion or marginalisation which is based on the impression that people living with disabilities lack the capacity to contribute meaningfully to the economy; inadequate physical power or energy to wade off sexual advances from sexual predators; grinding poverty; restrictions on access to information and so on. But it is hoped that the challenges of people living with disabilities can be reduced through inclusive education. Education is generally viewed as a means to overcome poverty and improve the quality of life of the people. So, individuals with disabilities are believed to fair better, not just with education but inclusive education that allows them to access the same level of education and educational facilities as their counterparts.

So, what is inclusive education? Without any doubt, many scholars have lashed at this concept and explained it in various ways (Anupriya and Salim, 2014; Sharma, 2014). For instance, it is defined as a way of teaching all students in the same learning environment, regardless of their disabilities, granting them equal access to academic resources (Anupriya and Salim, 2014). It ensures that students of the same age group learn together and are offered the necessary support to learn and are actively involved in every aspect of school activities (Gajendrabhai and Saini, 2020). According to Ugwu and Onukwufor (2018), inclusive education is an educational approach to deal with the issue of exclusion in the educational system. It enables people to be educated within their communities and neighbourhoods with their peers without any discrimination despite possible physical disabilities and challenges (European Agency for Special Needs and Inclusive Education, 2015). With inclusive education, learners can actively participate in learning activities despite their challenges. Inclusive education serves to help people to access education and is a tool to bring about attitudinal change toward individuals with disabilities (Dupoux, Wolman and Estrada, 2005).

Bhat and Geelani (2017) see inclusive education as a proper strategy used to make education accessible to everyone in the world regardless of the disability any learner may have and to guarantee equity in the society at large. du Plessis (2013, p. 78) explained inclusive education to be a “learning environment that promotes the full personal, academic and professional development of all learners irrespective of race, class, gender, disability, religion, culture, sexual preference, learning styles and language”. Bhat and Geelani (2017) stressed one of the benefits of inclusive education is that it enables the capacity of an educational system to be accessible to all learners. Begum (2017) narrowed his view down to internal changes in organisations such as schools which border on policies, practices and cultural perspectives and that all children are allowed to participate in the same class without any segregation (Begum, 2017). Basically, it is meant to make equal provisions for people living with disabilities to access quality education just like their counterparts.

Aside from conceptualising its benefits, some governments have advanced inclusive education beyond scholarly debates to policy formulation and implementation at the government level (United Nations, 2015). For instance, in Nigeria, the government has taken further steps to enshrine the fundamental rights of People Living With Disabilities (PLWD) in the 1999 Nigerian Constitution. The 1999 Nigerian constitution protects people living with disability from inhuman acts and offers them personal liberty to engage in productive activities including education (Nigeria, 1999a; Nigeria, 2009). Similarly, international organisations spelt out their rights too. For instance, the Convention on the Rights of Persons with Disabilities 2006a (CRPD) recognises the rights of people living with disabilities. Seven out of its eight principles make provision for people living with disabilities. These principles are (Etieyibo, 2020, p.65) “respect for inherent dignity, individual autonomy including the freedom to make one’s own choices, and independence of persons; non-discrimination; full and effective participation and inclusion in society; respect for difference, and acceptance of persons with disabilities as part of human diversity and humanity; equality of opportunity; accessibility; equality between men and women; respect for the evolving capacities of children with disabilities, and respect for the right of children with disabilities to preserve their identities”. It is obvious that these rights, especially the right to “equality of opportunity” encompasses the right of people living with disabilities to full education like any other person in the society. So, inclusive education is already admitted as one of the fundamental human rights of everyone (United Nations, 2016). The provisions and knowledge of these rights and their applications protect their rights from being trampled upon; boost their confidence to clamour for their rights in the best ways they can; and equally galvanises individuals, public figures, and social activists to advocate for a better life for the affected people, including inclusive education.

Despite its importance and the provisions of the laws, the implementation of inclusive education has been slowed down by challenges, especially in developing countries. In other world, developing countries are experiencing some challenges in implementing inclusive education. PLWD in these countries are yet to benefit from inclusive education. This study, therefore, intends to highlight specific challenges of implementing inclusive education in developing countries, including Nigeria inclusive. The highlight of these challenges will help nations intending to implement inclusive education to be well prepared to face and overcome these challenges. Basically, the main problem to be tackled in this paper is the assessment of the challenges of implementing inclusive education in developing countries. These challenges are being faced in many developing countries, Nigeria inclusive, across the world. The study aims to answer a crucial question about inclusive education. The question is, “What are the challenges of implementing inclusive education in developing countries?”

Methodology

The main question that this study aims to answer is “What are the challenges of implementing inclusive education in developing countries?” In this study, a systematic literature review method is employed to achieve its aim and answer the research question. The research method enables a series of extant studies to be reviewed, and pertinent findings are drawn out from them to answer the study’s research question. Tawfik, Dila, Mohamed, Tam, Kien, Ahmed and Huy (2019) posited that the primary strength of this approach is that it gleans recent happenings about a subject from extant studies and keeps readers updated about the experiences. Snyder (2019) stressed that it enables the occurrences to be narrated systematically and with clarity. In other words, it unearths existing challenges confronting governments and advocates of inclusive education in the process of implementing it. It then implies that systematic literature review is one of the tested methods capable of bringing pertinent findings out of the review of a series of extant studies. The method enables the findings of many studies to be synced together to show a pattern or any discrepancies. So, like the popular quantitative, qualitative and mixed research methods (Creswell, 2014), a systematic literature review provides unquestionable and objective findings for any study where it is judiciously applied.

In this study, the systematic review is limited to studies done between 2013 and 2021. Since the current study aims to highlight recent challenges, several studies were explored and reviewed to discuss the concept of inclusive education, the rights of people living with disabilities, and critical challenges which have beleaguered several attempts made to implement inclusive education. This approach highlights the challenges of implementing inclusive education in many countries and is found in the studies considered. Also, the selected studies employed popular research methods – qualitative, quantitative, and theoretical research methods (Egaga and Aderibigbe, 2015) and obtained pertinent data from respondents who are stakeholders in the field of education, from students to teachers to principals or headteachers of schools in various developing countries. This method enables the study to focus on the objective findings of each study. Lastly, the review was done in a systematic way starting with the study area, the randomly selected respondents and suitability for the respective studies; and specific findings of each study are pointed out. The review was not clumsy, and their conclusions entailed critical challenges facing the implementation of inclusive education.

Lastly, this method helps to highlight a vast number of challenges facing the implementation of inclusive education in many developing countries from India to Swaziland, Lesotho, South Africa, Zambia to Nigeria. It can be said that there is an exhaustive list of challenges frustrating the implementation of inclusive education in developing countries around the world.

Results and Discussions

In answering the central question of this study, which was stated above, the works of different scholars, within and outside Nigeria, are explored and reviewed. In the study conducted by Delubom, Marongwe and Buka (2020) on two Technical Colleges, they found out that the implementation of inclusive education was stalled by the low level of infrastructure, lack of funding, and inadequate staff to help students with disabilities. They recommended that technical colleges should either train their staff or employed competent staff to achieve inclusive education. Gajendrabhai and Saini (2020)

identified negative attitudes of people, families of PLWD and teachers impaired the implementation of inclusive education. Sharma (2015) stressed that modern facilities are required to achieve and implement inclusive education, that is, to integrate PLWD into the mainstream classrooms. In other studies, Chibwe and Mulenga (2021) opined teachers are not adequately trained and available buildings did not make provisions for PLWD. Hence the implementation of inclusive education appears impossible. Mpu and Adu (2021, p. 225) highlighted “overcrowding, insufficient training, lack of knowledge and skills of educators” as the challenges impeding the implementation of inclusive education. Overall, inclusive education is beneficial to PLWD and their counterparts. However, its implementation is bedevilled by several challenges as revealed in the reviewed studies.

So, the implementation of inclusive education is challenging for countries experiencing the problems identified to be confronting inclusive education. Ugwu and Onukwufor (2018) investigated one of the major challenges of implementing inclusive education which is principals’ attitude toward inclusion in one of the states in the South-South region of Nigeria. They administered a survey instrument to 116 principals, via stratified random sampling, in public and private in Rivers State, Nigeria. The data collected was analysed through descriptive and inferential statistics. Findings, then, revealed that principals with adequate knowledge of inclusive education showed a positive attitude towards it and vice versa. It implies that the knowledge of present principals in schools can serve as a mechanism to promote inclusive education in schools.

Further studies on the challenges of implementing inclusive education in developing countries are explored. Among these studies are the studies were done by Khoaeane and Naong (2015); Bugti and Kazimi (2021); Adebayo and Ngwenya (2015) and a host of others. Specifically, Khoaeane and Naong (2015) explored the challenges bedevilling the implementation of inclusive education in Lesotho and ways to overcome these challenges. The authors obtained data from 256 randomly selected teachers from two distinct districts of Lithabaneng and St. Bernadette in Lesotho. The findings unfolded critical challenges facing the implementation of inclusive education in the country. They found out that the primary stakeholders such as teachers were finding it difficult to handle students with disabilities; schools in the country still lacked the basic infrastructure for the initiative, and the students did not receive adequate financial stability. All these challenges frustrated the implementation of inclusive education in the two districts of Lesotho.

Similarly, in the study done by Beyene and Tizazu (2010), 63 per cent of the participant teachers confirmed that there was no adequate training for teachers on how to manage learners with challenges and disabilities. More so, they experienced challenges like lack of teaching materials and poor attitude of parents and authorities towards the idea of inclusive education. All these challenges make inclusive education a pipe dream in the country. Causton and Theoharis (2013), in their study, argued that teachers were unable to manage the increasing number of children with disabilities especially behavioural difficulties in the classroom. For instance, they disrupt classes and undermine the learning climate of the classroom. They posited that teachers, on their part, did not have sufficient knowledge and skills to offer necessary help to learners with disabilities and the lack of knowledge usually lead to frustration.

Bugti and Kazimi (2021), in Karachi, examined the challenges and opportunities inherent in the implementation of inclusive education in Sindh, Pakistan. The study focused on selected primary schools in the capital of the country – Karachi. Data was obtained for the study from two main schools using the Likert scale type of questionnaire. Senior teachers and school principals, who knew much about inclusive education, were the participants. The outcomes of the study pointed to certain challenges. These challenges included a lack of commitment and unity among teachers and parents regarding inclusive education for children with disabilities. It was suggested that adequate funding should be made for the implementation of inclusive education to cover equipment, teachers’ learning programmes, and materials for the programme.

In Swaziland, Adebayo and Ngwenya (2015) explored the subject of inclusive education and the challenges impeding its implementation in the country, drawing evidence from the Elulakeni Cluster Primary Schools situated in the Shiselweni District of Swaziland. With headteachers from 14 schools participating in the study, findings showed a list of challenges impeding the implementation of the inclusive system in the country. The challenges include a lack of competence on the part of the

teachers, poor financial and material support for the programme, poor administration, poor attitude of the teachers, lack of collaborative efforts, unfair treatment of students and a host of other challenges. The ministry of education was counselled to organise adequate training programmes for teachers on inclusive education. Similarly, Thwala (2015) conducted a solo study on the same subject of inclusive education in Swaziland but focused on teachers who oversaw the programme in the country. He was particular about the challenges they encountered in managing the inclusive programme. Data was obtained from the participants through a focus group discussion in which teachers were engaged in productive conversations on the issue of inclusive education. Results show that a common problem of lack of training for teachers was the main challenge teachers were facing in running an inclusive educational system. So, the Ministry of Education was advised to organise courses, conferences and programmes for teachers on inclusive education.

In South Africa, Mpu and Adu (2021) elicited data from three schools in the Buffalo City to find out the challenges of implementing inclusive education in the country. Like many of the extant studies, findings showed that low level of training, overpopulation of the classroom, and inadequate knowledge and skills of the educators made the implementation of inclusive education challenging and difficult. In India, Bhat and Geelani (2017) identified poor attitude from teachers, non-compliant curriculum, inadequate resources and infrastructure, ignorance of parents, poor planning and poor execution of the inclusive educational policies as the challenges frustrating the implementation of inclusive education in the country. In Zambia, Chibwe and Mulenga (2021) researched the challenges of implementing inclusive education in the country with evidence being drawn from selected Primary Schools in the Kitwe District of the country. With the use of a semi-structured survey, data obtained from the selected respondents revealed challenges similar to the challenges of other countries that are finding it difficult to implement the inclusive educational programme. Some of the challenges encountered in the country are the lack of trained personnel and the inadequacy of the school buildings for the programme. Gajendrabhai and Saini (2020) posited that negative attitudes of the families of people living with disabilities and the general public; poor attitude of teachers toward inclusive education; inadequate facilities for learning are critical challenges in implementing inclusive education. Begum (2017, p. 6563), while exploring the issues and challenges of inclusive education in India, stated that “A limited understanding of the concept of disability, negative attitudes towards persons with disabilities and a hardened resistance to change” are the major challenges impeding the implementation of inclusive education in the country.

This paper, therefore, attempts to assess and highlight the challenges of implementing inclusive education in developing countries with the sole aim of drawing out these challenges and helping stakeholders to come to terms with the problems making inclusive education difficult in some countries. The findings of the study will, therefore, help to design a roadmap on how to best implement inclusive education and overcome its challenges. It is believed that with a clear view of what the challenges of implementing inclusive education are, stakeholders will be able to navigate these challenges and provide adequate education for everyone regardless of their physical challenges.

The study results show that the implementation of inclusive education is difficult because of several factors or challenges. These challenges range from government-based to individual persons in the educational sector. In other words, some of the challenges stemmed from teachers and headteachers of many schools and civil servants working in the Ministry of Education of affected developing countries.

The review of the selected studies shows some patterns in terms of the nature of the challenges undermining the implementation of inclusive education in developing countries. Premised on the findings of the selected studies, the challenges impeding the implementation of inclusive education include inadequate funding, poor attitude of the society, poor attitude of the parents of People Living With Disabilities (PLWD), inadequate infrastructure, inability to manage the increasing number of PLWD, inadequate learning materials, lack of trained personnel, and failure of available facilities to accommodate People Living With Disabilities (PLWD) (Sharma 2015; Delubom, Marongwe and Buka, 2020; Chibwe and Mulenga, 2021; Mpu and Adu, 2021). These challenges stem mainly from the poor attitude of the government to the issue of inclusive education. While the government makes policies to ensure the realization of inclusive education, it fails to back it up with necessary financial provisions.

Other challenges confronting the implementation of inclusive education are poor attitudes from the parents of the People Living with Disabilities (PLWD) towards inclusive education (Gajendrabhai and Saini, 2020). Principals are the main stakeholders in the pursuance of inclusive education among the people. So, any attitudinal change towards the issue of inclusive education has a direct bearing on whether it will be realized or not.

Premised on the findings of the study, it is valid to suggest that individuals, educational establishments, and government should collaborate to overcome these challenges and implement inclusive education for the good of everyone in the society. Also, adequate training must be given to teachers and headteachers to keep them abreast of what inclusive education means and learn the skills needed to manage classrooms consisting of all students from different backgrounds without any discrimination.

This current study employed a theoretical research method to achieve its objective and answer the research question. It is suggested that a mixed research method should be used in subsequent research in order to generate more robust findings.

Conclusions

Implementing inclusive education would be difficult due to the lack of clarity and uncertainty on what it entails. Teachers deal with several hurdles in their experience of implementing inclusive education and learning to integrate into the teaching can be a particularly challenging process, especially given the number of new initiatives launched in local education. In addition, working with parents - the first point of contact with the community outside the school - is another challenge of inclusive education. Parents are the principal stakeholders outside the administration circle of the school. Aside from these, teachers face numerous obstacles in providing quality education to all students as disparities in our society increase.

Overall, inclusive education is suitable for society because of its capability to integrate all people regardless of their disabilities into a single learning system. However, its implementation is impeded and challenging because of the aforementioned factors such as lack of training for teachers, poor attitude, inadequate infrastructure, and a host of other challenging situations. It is imperative that all stakeholders in education make conscious efforts to overcome these challenges and implement inclusive education. Hence government, the ministry of education, educational donors, domestic and international organizations, actual and prospective teachers, parents, the society, and the students should embrace the concept of inclusive education and their respective roles to make it a reality around the world, especially in developing nations.

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Inclusive Education for People Living with Disabilities in Nigeria

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Abstract: Achieving inclusive education is one of the lofty goals set by the United Nations which was, then, passed down to individual nations around the globe. It is believed that inclusive education has great benefits for individuals and society at large. However, its level in developing nations, Nigeria inclusive, is still very low. The aim of this paper was to assess how inclusive education for people living with disabilities can be achieved in Nigeria. To achieve this aim, a theoretical research method was employed. The methods enabled a systematic literature review to be done in this study. To this end, several published studies were reviewed and explored to draw out significant lessons for inclusive education and identify possible actionable steps the government could take on inclusive education. The study results revealed that the level of inclusive education was still very low and far from the expectations of its advocates. While the Nigerian government supported the idea of inclusive education and enshrined the rights of people living with disabilities in the 1999 constitution, sufficient actionable steps are yet to be taken to achieve inclusive education. Similarly, inclusive education faced severe challenges in the country in the form of low levels of infrastructure and teaching materials and resources. The living conditions of people living with disabilities were poor because cultural beliefs and myths about them enable people to treat them poorly and shabbily. These findings are significant to inclusive education advocates and policymakers in the country because they help them to understand the poor level of inclusive education in the country, and poor governmental efforts towards inclusive education; re-evaluate their existing approaches, and design better approaches for the course of inclusive education.

Keywords: advocacies, disabilities, inclusive education, Nigeria, poor.

Introduction

Achieving inclusive education is a goal advocated for by many international groups and institutions such as UNESCO and UNICEF in which people living with disabilities are set up to have access to education in the same manner as people living without any disability (Richler, 2020; Ydo, 2020). While it was initiated by the United Nations Educational Scientific and Cultural Organization (UNESCO), many nations and international bodies are strongly advocating for it (Kusimo et al., 2019). It was perceived that inclusive education is beneficial to individuals and the nations at large (Ajuwon, 2012) and has been established as the universal right of people living with disabilities to education (Egaga et al., 2015). Hence nations across the world are encouraged to sign up to pursue the goal at their respective national levels. Even the data on people living with disabilities is so staggering that attention has to be paid to them. For instance, about 650 million people across the entire globe have one disability or the other and the United Nations (2011) stated that 150 million of the 650 million people are children living with disabilities (United Nations; 2011, UNESCO, 2010). Unsurprisingly, more than 80 percent of the children with disabilities are residents in developing nations and they are thereby prevented from active participation in school (Agunloye et al., 2011).

In this paper, the focus is on how inclusive education can be achieved for people living with disabilities in Nigeria. It aims to answer the question, "How can inclusive education be achieved in Nigeria?" To this end, pertinent concepts or constructs in the study are reviewed to aid the understanding of readers and to help the study achieve its aim. More so, the importance of inclusive education is discussed at length including the challenges encountered in the implementation of inclusive education citing the challenges of different countries, especially the developing ones in the world. It is then wrapped up with measures or efforts that can be taken to achieve inclusive education in Nigeria and, by extension, in the rest of the developing world.

The study is narrowed down to Nigeria, discussing inclusive education extensively as it affects people living with disabilities in the country. This is necessary because, in Nigeria, people living with

disabilities experience different levels of difficulties and challenges (Martinez et al., 2020). They are despised in society, labeled with strange and unpleasant tags, informally denied access to basic facilities and opportunities, have little or no recognized rights in the country, and the government's efforts towards ameliorating their conditions seem at the lowest ebb (Eleweke et al., 2016; Arimoro et al., 2019). As pointed out by Cornelius-Ukpepi et al. (2019), children with disabilities, living in developing and emerging countries such as Nigeria, are hardly in schools. They are confronted with numerous barriers such as non-accessible schools and teaching resources, teachers, and classmates exhibiting discrimination towards them. The experiences of females with disabilities are more harrowing than their male counterparts. All these barriers or challenges lessen their chances of accessing quality education.

It is appalling to state that it is almost impossible to exhaust all the challenges and difficulties of people living with disabilities in Nigeria. In some quarters, there are harmful traditional and cultural beliefs and myths about people living with disabilities in Nigeria. These beliefs include that people living with disabilities are suffering the consequences of the evil acts of their parents and a host of other unfounded myths about them. Unfortunately, there is a relatively high number of Nigerians who uphold these strange and unfair myths and beliefs about people living with disabilities (Etieyibo et al., 2016; Rohwerder 2018). And these harsh and unfriendly traditional and cultural beliefs, which are ingrained into many Nigerians, have worsened their living conditions, preventing them from accessing education in the country.

For a proper understanding of the issue regarding inclusive education for everyone, some of the key terms are defined and explained. Conceptually, in the simplest form, inclusive education is a combination of two keywords – education and inclusiveness. Education is a means of acquiring values and skills that enables an individual to function optimally in society (Adeyanju 2010; Etuk et al., 2012) i.e. it fosters personal and societal growth and development (Daura et al., 2015). Inclusive education can be said to be the process of teaching all students, with and without disabilities, in a regular school environment, accessing the same resources, academic practices, and activities (Anupriya et al., 2014). Inclusive education is defined as educational settings that allow children with disabilities and children without disabilities to receive education in the same learning environment (Egaga et al., 2015). The United Nations Convention on the Rights of the Child deems inclusive education as a legal, human right of people living with disabilities (Bouillet et al., 2015). Bouillet et al. (2015) posited that inclusive education enables children to learn together, actively engaged in the same learning and teaching process. Cornelius-Ukpepi et al. (2019) stress that inclusive education means that children with disabilities are integrated into the normal educational settings with their counterparts. They went further to state that inclusive education requires conscious efforts to alter educational policies, practices, structures, and systems to accommodate diversity in learning within a given locality. It ensures the active participation of learners not minding their disabilities. To Okwudire et al. (2018), inclusive education is a means to continuously increase the rate of participation of learners from different backgrounds in the learning curriculum, cultures, and collegiality of local schools. In inclusive education, learners are seen as being equal without any discrimination or marginalization. It ensures that all learners have equal learning opportunities to access quality education, educational materials, and resources, pertinent assistance not minding their disabilities, and thereby prepare them for a productive life in the larger society (Ibok 2015). So, with inclusive education, all students with disabilities and without disabilities are offered quality education. However, the degree of inclusiveness in some developing countries, particularly Nigeria, is still low with no sign of improvement soon (Fareo 2015).

In terms of importance, inclusive education does not allow any child of school age to be excluded from their learning thereby promoting national development (Cornelius-Ukpepi et al., 2019). Udo (2012) claimed that inclusive education enhances the improvements of all learners – learners with disabilities and learners without disabilities. The inclusive system of education makes it possible for all learners, with and without disabilities, to attend the same-age classes in their communities with special supports being offered to learners that need them (Bouillet et al., 2015). Inclusive education offers learners similar opportunities to hone and improve their skills and talents as individuals and in conjunction with other learners which helps them to achieve efficiency, relevance, and equality (Bjørnsrud & Nilsen, 2011). It helps to increase the rate of engagement of learners and their

educational success. So, when classrooms are safe and highly cooperative, members of the class develop a sense of belongingness (Jones & Gillies, 2014). It helps to underscore the concept and practical application of a community that consists of diverse people and eliminates the sense of superiority among learners (Cornelius-Ukpepi et al. 2019). In return, learners are able to achieve academic and social development. It eliminates barriers to friendship and collegiality, promoting cooperation and team spirit and work (Striully, 2016).

The issue of inclusive education is already accepted by the Nigerian government and the government has developed guidelines and policies to actualize the program by targeting three categories of people in the society – the disabled, the disadvantaged, and the exceptionally gifted (Federal Ministry of Education 2008). The guidelines and policies accommodate all kinds of people regardless of their disabilities which may be physical, mental, emotional, sensory, and any other forms of disabilities. However, it is bedeviled by challenges that make the implementation difficult. These challenges or barriers are poor attitudes from the government, lack of infrastructure to foster inclusive education, inadequate number of trained teaching personnel, ineffective policies to promote inclusive education, and a host of other barriers as identified in the literature (Ahmad 2012).

There are many extant empirical studies on inclusive education for people living with disabilities. Some of these studies are explored and reviewed to show the results of empirical studies done on achieving inclusive education in Nigeria. The findings of these studies are pointers to the measures that can be taken to achieve inclusive education in Nigeria. For instance, the study of Arimoro (2019) confirmed the nation has been a party to several advocacies for creating a non-discriminatory environment for people living with disabilities but it falls short in the area of implementing policies that actually ensure that people living with disabilities access inclusive education. In other words, the Nigerian government takes a crucial step toward achieving inclusive education, offering supports for it by partnering with international advocacies for inclusive education. However, the government makes no conscious efforts to achieve it within its border.

Eleweke, et al. (2016) conducted a qualitative study on inclusive education pointing out that a lack of access to support services makes inclusive education difficult to attain in Nigeria. The result of the study showed that the achievement of inclusive education is hinged on the provision of support services that enable people living with disabilities to cope with the rigor of accessing education with people without disabilities. So, the provision of support services is essential for the achievement of inclusive education. Egaga, et al. (2015) expounded on the concept of inclusive education but with reference to children with hearing impairment. The study explored a wide range of strategies and support programs that foster the achievement of inclusive education in the country. It ended by suggesting that the goal of inclusive education is only attainable through the enactment and implementation of legislative policies and the provision of required equipment and materials for the implementation of the program. Kusimo et al. (2019) assessed inclusive education with reference to the fourth goal stated within the framework of the Sustainable Development Goals (SDGs). They employed the quantitative method which enabled questionnaires to be administered to 200 respondents but only 188 responded to it. The analysis of the survey instrument revealed that the implementation of SDG goal 4 with respect to people living with disabilities was in a terrible state. It was suggested that individual Nigerians needed access to knowledge, skills, and information for the nation to experience meaningful development.

Methodology

The question this study aims to answer is “How can inclusive education be achieved in Nigeria?” It is the principal question the study aims to answer through its plethora of reviews of extant studies on the issue of inclusive education in a country like Nigeria, a representative of developing countries. In order to answer this question, the study employs a systematic literature method which is equally deployed to achieve its aims and objectives. This is premised on the strength of the method to keep readers abreast of the recent happenings on the issue of inclusive education, particularly among people living with disabilities in Nigeria (Tawfik et al., 2019). The method helps to narrate the crux of the study in a clear, systematic manner (Snyder 2019). It enables the study to peruse different scholarly works on the subject of inclusive education.

Different resources were explored to source for extant studies on the issue of inclusive education. In total, more than twenty (20) studies between the period of 2011 and 2020, aside from the Nigerian constitution, were reviewed. Out of them, ten (10) were empirical studies published between 2018 and 2020. The selected studies were reviewed in order to glean useful and relevant information from them. In short, these studies discuss the issue of inclusive education using various qualitative and quantitative research designs (Egaga et al., 2015; Kusimo et al., 2019; Arimoro 2019). During the study, the concept of inclusive education was extensively explained and defined and specific barriers to inclusive education in Nigeria were pointed out. Thus, the findings of these studies give an insight into the current study and answer its research question.

Results and Discussions

Overall, this study generates pertinent and reliable findings from the theoretical research conducted through the review of extant studies on the issue of inclusive education in Nigeria. Some of the specific findings of the study are:

First, inclusive education requires those students with disabilities and those without disabilities to access the same education using the same resources, under the same conditions, and taught by the same teacher (Ahmad 2012; Kusimo et al., 2019). Inclusive education eliminates all forms of separation and discrimination that people living with disabilities are experiencing in society.

Secondly, there are harsh and unfriendly beliefs about people living with disabilities in Nigeria (Fareo 2015; Etieyibo et al., 2016). In some quarters, they are perceived as individuals suffering from the consequences of the evils done by their ancestors or the evils committed by them earlier in life. These beliefs are harmful and unhealthy.

Thirdly, the rights of people living with disabilities are already protected by the 1999 Nigerian constitution (Nigeria 1999a; Arimoro et al., 2019; Etieyibo 2020). They have rights to personal liberty to engage in any productive activity; and the right to live. Similarly, the Nigerian government has signed treaties bordering on the rights of people living with disabilities to education. However, the government has not done enough to make them actionable and enforceable.

Fourthly, the study revealed that inclusive education offered learning opportunities to learners with disabilities, accessing quality education with their counterparts without discrimination and prejudice. It is a tool to build a community without discrimination and enable learners to understand the need not to discriminate against anyone at an early age.

Fifthly, it is clear that the Nigerian government has developed guidelines and policies to execute the inclusive education program accommodating people without any discrimination against their disabilities (Federal Ministry of Education 2008). However, the execution is sluggish. The pursuit of inclusive education can only be achieved through the enactment and implementation of legislative policies (Adetoro 2014; Egaga et al., 2015). It is therefore suggested that the government should exercise the political will to ensure that the guidelines for inclusive education are followed closely across the country. The enforcement of pertinent policies on inclusive education guarantees the achievement of inclusive education. Without exercising political will, inclusive education will remain an elusive laudable program not executed.

Lastly, inclusive education requires the availability of essential teaching materials, resources, and infrastructural facilities. It is suggested that the government should make a substantial budget for the provision of materials, resources, and infrastructural facilities to guarantee the success of this programme. Without the provision of these resources and facilities, teachers will underperform and fail at their responsibility to provide quality education to all students regardless of their physical disabilities and lack of it.

While these specific findings are drawn from the theoretical research conducted, it is pertinent to state that future studies on the subject should employ a mixed research method to assess inclusive education in Nigeria. Questionnaires and interviews should be leveraged to elicit information from the people. The findings of this approach are bound to generate more robust findings than the current theoretical research.

Conclusions

Inclusive education is still a pipe dream in Nigeria. While the government pays lip service to it by offering support to advocacies for inclusive education and making provisions for the rights of people with disabilities to be protected; it needs to follow up all these laudable actions with a political will to pursue the achievement of inclusive education in Nigeria. Without any appropriate policies, discrimination in learning will persist. Hence government should formulate and enforce policies to achieve inclusive education.

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Challenges of Teachers' Remuneration in Latvia, Lithuania and Estonia: The View of Trade Unions as Social Partners

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Abstract. Uncompetitive remuneration for teachers has been a problem for many decades in Latvia. Government together with social partners – education trade unions, have tried to solve this problem by asking to allocate additional financial resources to public education budget, by developing teacher salary raise schedules and various educational reforms in all three Baltic countries. The aim of the study is to research general principles of teachers' remuneration and workload in Latvia, Lithuania and Estonia, for comparison and social dialogue argumentation on the part of education trade unions. Research approach is analysis of information on teachers' salary calculation and workload presented by education trade unions as semi-structured interviews. Reflection on the topic in relation to theoretical sources, including international organizations representing education and social dialogue issues, is enclosed. The results of the research show that there are differences in all three countries regarding general education teachers' remuneration. The main challenge is the implementation of effective and decision – making oriented social dialogue between trade unions and education policy makers regarding teachers' weekly contact hours and paid additional hours per full workload, minimal and average monthly salary rate for teachers. The conclusion of the paper indicates that, based on Lithuania and Estonia experience, immediate reforms in Latvia are necessary to increase public funding for education, to increase teachers' remuneration, harmonize and balance workload and ensure that teachers are paid for all duties performed.

Keywords: teachers' remuneration, workload, trade unions, social partners, social dialogue

Introduction

Uncompetitive remuneration and heavy workload have resulted in teachers' "burnout syndrome", characterized as occupational burnout resulting from chronic work-related stress, with symptoms of energy depletion or exhaustion, increased mental distance from one's job (Understanding and Preventing..., 2006). It has resulted in reduced professional efficiency, shortage of vacancies in various teaching subjects in educational institutions, as well as decline of teacher's profession attraction to young people, including students of pedagogical programs in higher education institutions in Latvia. The study highlights the necessity to review and analyse workload and payment models of general education teachers. Because of the current system were "money follows a student", insufficient remuneration, increased workload, unpaid additional duties, and "burnout syndrome" are those challenges which are faced not only by individual teachers but by all education system in Latvia (Challenges of Teachers'..., 2021). The aim of the study is to research general principles of teachers' remuneration and workload in Latvia and two other EU countries – Lithuania and Estonia, for comparison and social dialogue argumentation on the part of education trade unions. In order to achieve the aim, the following tasks were set: 1. Research theoretical aspects of trade unions as government social partners in social dialogue; 2. Use empirical results concerning comparison of salary and workload components of general education teachers in Latvia, Lithuania and Estonia from the research conducted by Latvian Trade Union of Education and Science Employees (LIZDA) in December 2000- January 2021; 3. Summarize theoretical and empirical findings, organize a discussion and come up with conclusions. The research subject - teachers' remuneration and workload aspects in the view of trade unions. The main research method used: semi-structured interviews with members of education trade unions in Latvia, Lithuania and Estonia.

Methodology

Semi - structured interviews were used to interview government social partners in education in Latvia – LIZDA, Lithuania – LESTU, and in Estonia – EEPU. The sample of the empirical research "Challenges of Teachers' Remuneration in EU Countries" conducted by LIZDA is broader – 9

education trade unions, representing EU countries, were interviewed: Latvia, Estonia, Lithuania, Poland, Slovakia, Slovenia, Czech Republic, Bulgaria, Germany. Because of limitation of the research subject, this study presents, summarizes and analyses data only from LIZDA (Latvia), LESTU (Lithuania) and EEPU (Estonia). Research presented more data which is not included in the study: teachers' qualification requirements, major support activities implemented to motivate young people to choose teaching profession, as well as issues concerning remote studies for students provided during the COVID-19. Theoretical information sources used: social dialogue literature sources – Sage publications and International Labour Organization's (ILO) concepts on social dialogue, Eurydice and Organization for Economic Co-operation and Development (OECD) reviews on teachers' statutory salaries and allowances. Normative regulations of the Cabinet of Ministers, Republic of Latvia, concerning teachers' remuneration and workload, are used.

The interview was structured with 10 questions to research teachers' remuneration and workload situation in Latvia, Lithuania and Estonia. Results from five questions were used to reach the aim of the study:

1. What are the financial sources for general education teachers' remuneration?
2. Is the public funding allocated primarily based on the number of students (the model "money follows a student") per educational institution?
3. How many weekly working hours per full workload a teacher must work? What are the contact (teaching) hours from the total number of hours per week, and how many hours are allocated for other duties concerning preparation for lessons, assessment of students' assignments, consultations and other duties?
4. What is the minimal gross teacher salary rate in EUR per month per full workload?
5. What is the average gross salary in EUR per month per full workload for a public sector employee?

The interview results were structured in the following thematic blocks to compare teachers' remuneration and workload situation in all three Baltic countries:

1. Financial sources of teachers' remuneration, minimal and average salary rates, comparison with the average salary rates in public sector.
2. Working hours per full workload, contact hours and hours for additional duties as stipulated by the law or other normative regulations.

The information assessed were used to analyse remuneration and workload application to general educational levels – primary, elementary, and secondary, and the differences among the described aspects in Latvia, Lithuania and Estonia.

Results and Discussion

1. Education trade unions as government social partners for improvement of teachers' remuneration system

Social dialogue at the national level refers to cooperation between social partners, i.e., employees' and employers' organizations, with the government. It can address a wide range of issues from labour relations to wider social and economic challenges (National Tripartite Social..., 2013). Hence, the social dialogue concept includes broad aspects of social and economic challenges which include also payment and workload systems for employees in education. Highlights of the importance or organizational resources and capabilities for interactions and relationships among social partners in various industries are researched at a broad international scale (Bechter B. et al., 2021). To understand the education trade unions of all three countries as social partners, it is necessary to present short introduction into trade unions' organizational activities and goals. LIZDA is an independent organisation founded on May 19, 1990, and at the moment is the largest trade union in Latvia. LIZDA unites more than 22 000 employees working in education and science. LIZDA members actively pursue their interests of improving working and living conditions, furthering education and science

field development. LIZDA is an official social partner of the government (Latvian Trade Union...,2021). Approximately the same structure and goals are implemented by EEPU. It is also an independent, voluntary trade union organization. It brings together all education staff associations and unions working in education sector. The aim of the union is to represent and protect professional, economic and social rights and interests of its members in education sector. The union has about 10 500 members (About Estonian Education..., 2021). LESTU is the largest trade union organisation for education employees in Lithuania with about 9000 members. The union unites employees in all fields of education, ranging from pre-primary teachers to lecturers and researchers in universities. The union is actively engaged in promoting the overall professional and trade union interests of its members at all levels – national, regional and institutional. The union is politically independent and is committed to influence the education policy of the government and employers (Lithuanian Education and..., 2021).

Social dialogue carried out by official government social partners is defined as all types of negotiations, consultations or exchange of information among the government, employers and employees at different levels of economy. Social dialogue has faced major challenges over the last decades, these include growing global competition, technological and organisational changes as well as the emergence of new forms of work alongside with digitalisation. In most countries and across all geographical areas, social dialogue has suffered from declines in trade union membership, a more fragmented employer community and lower coverage of collective agreements (Social dialogue in..., 2020). While impacted by these developments, social dialogue remains a key instrument for achieving a broad range of societal goals. In several OECD countries tri - and bipartite social agreements have played an important role in softening some of the employment effects of the financial crisis (Education at a Glance, 2021). More effective social dialogue could help to reduce inequalities, enhance the inclusiveness and performance of labour markets, and help countries to achieve their commitments.

One of the platforms where government, employers and employees discuss issues concerning teachers' remuneration and workload in Latvia is the Latvia National Tripartite Cooperation Council (NTSP). Tripartite social dialogue has to play a role in the formulation, adoption and implementation of policy decisions, especially on labour market issues, labour law, social security and education. The council considers various social, economic and education issues in order to agree on the most appropriate decision for all parties involved (Nacionālā trīspusējās sadarbības...,2021). The council coordinates tripartite social dialogue between employers' organizations, state institutions and trade unions in order to harmonize the interests of organizations in social and economic issues.

Globally, ILO is respected and consulted by all education trade unions in the European Union. Labour organization defines social dialogue as a process including all types of negotiations and consultations among representatives of government, employees and employers, on issues of common interest relating to economic and social policy. It is a process of discussions and joint decision-making that results in the formulation and adoption of social, economic and labour policies, laws and regulations as well as social pacts, joint opinions and policy positions (Social Dialogue in..., 2020). Tripartite social dialogue, involving government and employers and employees' representatives, is the main form of social dialogue among organisations and the government. Conclusions concerning tripartite consultation at the national level on economic, education and social policy promote tripartite cooperation at the national or other appropriate levels. Its efforts in this domain should above all seek to ensure the fulfilment of the conditions necessary for the smooth functioning of tripartite cooperation. In this regard, special attention should be paid to gathering, evaluating and disseminating information, raising awareness, as well as offering assistance to strengthen the capacity of governments and employers' and employees' organizations to participate effectively in tripartite cooperation (The Effectiveness of..., 2020). Social dialogue is implemented through establishment of bilateral or tripartite councils, participation and decision making in employment and socio-economic agreements in Lithuania and Estonia.

Teachers' knowledge and skills, their commitment to the job are all essential factors in achieving high quality education outcomes. Countries must consider that adequate and competitive remuneration is closely linked to teachers' commitment and quality education outcomes (The structure of..., 2020). Thus, teachers' salary increase and workload negotiations are the major challenges of social partners in dialogue with the governments in all three Baltic countries.

2. Funding sources and remuneration for general education teachers in Latvia, Lithuania and Estonia

General education teacher is defined as a primary, elementary and secondary education level teacher. General education teachers' workload in Latvia – paid hours per week (30 working hours) corresponds with the monthly salary rate of EUR 790 from 01.09.2020. in Latvia (Pedagogu darba samaksas..., 2018). The number of working hours per week includes not only contact hours, but also preparation for lessons, assessment of students' written works, individual and group work, consultations, methodological and project work and other duties. Teaching subject, number of students in a class as well as other factors stipulated by the municipality - founder of the educational institution, are taken into consideration when calculating teachers' remuneration. The salary rate is determined by the principal of the school from the current year September 1 till the next year's August 31. In accordance with the criteria approved at the school and agreed by the municipality, the teacher salary rate per workload can be determined higher than the state minimal teacher salary per month. The principal of the school may consider various factors (including work experience, professional qualification, etc.) for teacher's salary raise. The teacher salary is the total sum of calculation of multiplying teacher's workload with the monthly salary rate. The teacher salary every year is fixed by the principal of the school by making tariffication. Astronomical hours (including breaks between teaching classes) are taken into consideration when calculating teachers' remuneration (Kā veidojās skolotāja..., 2019). To summarize the teacher salary calculation system, it is influenced by three factors: workload hours per week, monthly salary rate and salary supplements.

Education International (EI) and Education Trade Union Committee in Education (ETUCE) have researched teachers' wages at 27 EU member states on a regular basis, and teachers' wages are considered to be an important factor in attracting new entrants to the teaching profession, as well as in retaining existing teachers. Comparative surveys provide education trade unions with more arguments in their struggle for better wages and working conditions for teachers at both the national and European level through giving a better and broader international perspective. The remuneration of working teachers varies greatly between the different countries of the broader European region, and also within each country. Wages are largely determined by three main factors: the institutional status of schools, the type of labour contract agreed upon, and the stage a teacher has reached in his or her career (Comparative study of...,2008).

In order to understand various aspects of teachers' remuneration, it is necessary to clarify funding sources in Latvia, Lithuania and Estonia. The following research data shows what is the distribution of funding sources for teachers' remuneration in all three Baltic countries (Table 1).

Table 1

Public, municipal and private financial sources (%) for general education teachers' remuneration in Latvia, Lithuania and Estonia (Challenges of Teachers'..., 2021)

Education level	Latvia		Lithuania		Estonia		
	Public	Municipal	Public	Municipal	Public	Municipal	Private
Primary	80	20	80	20	93	2	5
Elementary	80	20	80	20	93	2	5
Secondary	80	20	80	20	93	2	5

The assessed data shows that there are no significant differences regarding financial sources for teachers' remuneration in Latvia and Lithuania – most of the funding or subsidy (80%) is coming from the public source, some funding (20%) is allocated by the municipal budget. In Estonia, the situation with financial sources allocated for general education teachers' salaries is different: firstly, there is private funding (5%) indicated, which is not the source in Latvian and Lithuanian public schools, secondly, public allocation is much higher (93%) than in Latvia and Lithuania, thus, the municipal subsidy for teachers' salaries is limited - 2% (Table 1).

Demands on the part of education trade unions exist that the public budget for teachers' remuneration has to be increased. That would ensure more stability and equality of teachers' remuneration. Local governments have different funding situations which influence how much financial allocation municipalities spend on general education. Positive EU level tendencies also indicate that general education teachers' remuneration has to be mainly covered by the state budget. The data indicate that there is no difference of application of funding sources regarding education levels (primary, elementary, secondary) in all three countries.

The public funding allocated for general education teachers' remuneration is primarily based on the number of students per education institution (school) in Latvia and Estonia. This model is generally called as the "money follows the student" principle. In Lithuania the situation is different – starting from 01.09.2018 the funding model for general education was changed. It shifted from the "money follows a student" model to a "class basket" principle. The new model is based on coherence between the basic education costs basket and the implementation of curricula. Public funding is allocated not to each student in the class but according to the size of a class. This major part of public funding is allocated as a targeted subsidy for schools in Lithuania. LIZDA as social partner negotiates with the government that the funding model for teachers' remuneration – "money follows the student" must be changed also in Latvia.

The next data (Table 2) shows the gross teacher salary rates per month per full workload in 2019 in Latvia, Lithuania and Estonia. In general, it has to be stated that teachers' remuneration – both minimal and average, differ significantly among EU countries. There are enormous differences between European countries in the statutory salaries for teachers. Gross statutory salaries can go from around 5000 EUR to more than 80 000 EUR per year, depending on the country (Teachers' statutory salaries, 2019). Also, it has been indicated by OECD that the total spending on educational institutions represents 4.1% of GDP in Latvia, although that does not mean that most of the percentage goes for teachers' salaries. Teachers' salaries are relatively low compared to other countries. As indicated by international organizations' reports, lower minimum starting salaries of OECD group countries are only in Hungary, Costa Rica and Brazil. (Teachers' and School, 2020; Education at a Glance, 2021).

Table 2

**The gross teacher salary rate (EUR) per month per full workload in September 2019
(Challenges of Teachers'..., 2021)**

	Latvia	Lithuania	Estonia
Minimal monthly salary rate	750	1142	1250
Average monthly salary rate	900	1213	1500

In each of the Baltic countries the minimal monthly salary rate is stipulated by the state normative acts. Education trade unions and the government have agreed that the minimal rate is increased every year. The increase which is regulated by teachers' salary raise schedule in Latvia is extremely low – approximately EUR 40 is added to the minimal salary rate every year (Par pedagogu darba..., 2018). Analysing annual Eurydice research provided by the European Commission on education issues, it has been stated that in 2018/2019 teachers' statutory salaries have increased in most education systems, but salary increases were generally modest or index-related to inflation (The structure of..., 2020).

The minimal monthly salary rate for a full workload for a general education teacher in Latvia is EUR 790 starting from 01.09.2020 (Par pedagogu darba..., 2018). On 01.09.2019 the minimal monthly salary rate was only EUR 750, and the average monthly salary rate for a teacher – EUR 900 (Table 2). Teacher's salary rate is not competitive with other public sector professions, considering that the average monthly salary rate in public sector was EUR 1076 in 2019 as indicated by the Central Statistics Bureau of Latvia (Vidējā alga publiskajā..., 2019). The situation regarding minimal and average salary rates in Lithuania and Estonia is much better. In Estonia both minimal and average

teacher salary is much higher – EUR 1250 and EUR 1500, but in Lithuania – EUR 1142 as minimal salary rate, and EUR 1213 as average (Table 2).

Updated minimal salary rates in Latvia, Lithuania and Estonia are shown in Table 3. It has to be noted that there is a difference between weekly working hours (including contact hours and preparation hours) for teachers in three Baltic countries. If assimilating minimal salary rate (EUR) to 40 hour per week in all three countries, difference in teachers' salary rate in Latvia, comparing with Estonia and Lithuania, still exists.

Table 3

Monthly minimal salary rate (EUR) for teachers in the Baltic countries in 2020/2021 (Challenges of Teachers'..., 2021)

Countries, stipulated working hours (h) per week	Minimal monthly salary rate (EUR)	Minimal monthly salary rate (EUR) equated to 40 h per week
Latvia, 30 h	830	1106
Lithuania, 36 h	1216	1351
Estonia, 35 h	1315	1503

It has to be noted that EEPU has asked to the education policy makers for EUR 1500 (for 35 weekly working hours) starting from 01.09.2021 as a minimal monthly salary rate for teachers. At the same time in Lithuania the teachers' remuneration system is positively influenced by the financial support to young teachers and by financial support to teachers in accordance with their experience (number of years worked): EUR 300 stipend is provided to young teachers, and EUR 400 is provided to experienced teachers as addition to their monthly salary rate.

3. Workload stipulations for general education teachers in Latvia, Lithuania and Estonia

As described above, general education teachers' workload in Latvia is 30 working hours what corresponds with the monthly salary rate of EUR 790 starting from 01.09.2020 (Pedagogu darba samaksas..., 2018). Out of the total 30 hours workload, 21 hours are teaching or contact hours, and 9 hours are those allocated for other duties (Table 4). Comparing the number of contact hours among all three countries, in Lithuania and Estonia contacts hours are different in comparison with Latvia – there are 24 contact hours per week for a teacher in Lithuania and Estonia.

Table 4

Weekly working hours (h) per full workload a teacher must work as stipulated by the law or other normative regulations (Challenges of Teachers'..., 2021)

	Latvia	Lithuania	Estonia
Total number of hours per week	30	36	35
Contact (teaching) hours from the total number of hours	21	24	24
Hours for other duties from the total number of hours	9	12	11

The data shows that total number of hours per week per full workload is stipulated by the state normative regulations in each country, but workload allocation – how many hours must be spent on teaching (contact hours), and how many on other duties (preparation for lessons, assessments of students' assignments, consultations, etc.) is not regulated by the state normative acts, it is stipulated by each municipality in cooperation with education institution.

In 2015 the Good Intention Agreement was signed between EEPU and the Estonian Ministry of Education and Research. According to the agreement, a full-time teacher can have up to 24 contact hours per week within 35 hour working time for the minimal teacher salary rate. Situation with time allocation for other duties in Estonia is much better.

It has been stated in the interviews that practical teacher workload per week is usually 45-55 hours. General education teachers are stipulated to work 30 to 36 hours per week (Table 4) out of which 21 to 24 hours are contact hours. In practice, preparation for lessons and assessment of students' assignments take more time than planned – in Latvia, the time for preparation hours and other duties (9 hours) is the smallest among all three countries. Hours for planning educational process, preparation for classes and assessments of students' assignments are set according to teaching subject and the number of students in a class.

In order to summarize research results and discussion on education trade unions as government social partners for improvement of teachers' remuneration system, comparison of funding sources and remuneration for general education teachers, and workload stipulations for general education teachers, the authors have come up with the conclusions.

Conclusions

1. There are no significant differences regarding allocation of financial sources for teachers' remuneration in Latvia and Lithuania. The major financing is provided by the public subsidy (80%), and there is a limited financial allocation from the municipal government (20%). In Estonia the public allocation is higher (93%) than in Latvia and Lithuania, thus, the municipal subsidy is only 2%. Education trade unions as government social partners' demand is to increase state funding to reduce inequalities in teachers' salaries which is caused by different financial opportunities of local municipalities in Latvia.
2. Eurydice and OECD research indicate that teachers' remuneration rates differ significantly among EU countries, depending on countries' economic situation and government priorities. Minimal and average monthly salary rates for teachers are significantly lower in Latvia than in Lithuania, and especially, in Estonia in 2019 and in 2020. That relates to the fact that in recent years the state budget for education and for teachers' remuneration has been increase more in Estonia and Lithuania than in Latvia.
3. The public funding allocated for general education teachers' remuneration is primarily based on the number of students per school in Latvia and Estonia. This model is generally called as the "money follows a student" principle. In Lithuania, the situation is different – the funding model "money follows a student" has been shifted to a "class basket" principle which is based on coherence between the basic education costs basket and the implementation of curricula. It has been negotiated by LIZDA - the funding model in Latvia has to be changed by adopting Lithuanian experience to ensure competitive and equal remuneration for teachers.
4. Workload stipulations for general education teachers in Latvia, Lithuania and Estonia are similar – teachers are appointed to 21 to 24 contact hours per week per full workload. The situation differs with paid hours for other duties – in Latvia only 9 hours per week are calculated and paid as additional duties which include preparation of lessons, assessment of students' work, consultations and other duties. In Lithuania and Estonia, the number of paid additional hours is higher – 12 hours in Lithuania and 11 hours in Estonia. The social partners in Latvia insist on paying for all extra duties performed by teachers.
5. Although total working hours per week per full workload for the general education varies from 30 hours to 35 hours, teachers' workload in practice in all three Baltic countries exceed 40 to 45 hours per week. That relates to extended timing for preparation of lessons and students' work assessment and leads to teachers' professional "burnout syndrome".
6. Immediate reforms in Latvia are necessary to increase public funding for education in general. That will allow to ensure adequate and competitive teachers' remuneration, harmonize and balance teachers' workload and ensure that teachers are paid for all duties performed.

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Secondary School as a Partner in Community-Led Local Development

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Abstract: The main goal of vocational secondary schools is to pass on to students both theoretical information and information needed for current and future practice. The Europe 2020 strategy confirms this goal as it puts emphasis on the environment, innovations and education, primarily regarding schools specializing in agriculture. The aim of this paper is to assess what position vocational agriculture schools have within the system of secondary schools in the Czech Republic, and whether they can contribute to becoming so-called community centres in the given municipality, or whether they possibly already implement certain activities leading to the community function. The survey included primary and secondary research; in primary research qualitative approach was used in the form of in-depth individual interviews with members of the management of selected vocational agriculture schools. In secondary research, selected strategic documents on transnational and national level and expert articles focused on community education were analysed. It is evident that vocational agriculture schools strive to use all potential ways to increase their attractiveness and want to participate in local life. However, they are burdened with paperwork and problems that hinder the implementation of other attractive activities undertaken by schools.

Keywords: secondary schools, agricultural education, community function of schools

Introduction

Since the 1970s, expert discourse has developed on the topic of knowledge society. The discourse has two distinct streams. The first can be labelled as rational optimistic and is represented mainly by authors from the first period of the said discourse (Lane, 1966; Blau et al., 1967). Their optimism includes the belief that knowledge will force prejudices of ideological and politicizing nature out from the development of society and will make way for technology as the main factor in economic development. Authors who also include the social dimension in the development have challenged this opinion. Their understanding is that access and acquisition of higher levels of education by no means implies reduction of social inequalities (Boudon, 1973; Bowles et al., 1976). They include a wider social and cultural environment in the relationship between education and the ability to make use of it (Goleman, 1996). At the same time, a group of critics is established in the second stream that draws the attention to the functioning of schools as organizations preserving the status quo in society, which naturally also includes reproduction of inequalities (Bourdieu et al., 1970). In this spirit, a critique of educational systems in current society emerges. It is focused primarily on phenomena and processes of devaluation, commercialization and market orientation of education (Lohmann, et al., 2002). The critical stream culminates in P. K. Liessmann's *Theory of Miseducation* (Liessmann, 2009). In the framework of the discourse in current education on both theoretical and practical levels, also life-long learning is in the centre of attention.

In 2020, the European Commission adopted a new Europe 2020 strategy (hereinafter referred to as "Strategy") that built on the older Lisbon Strategy. The Lisbon Strategy set out relatively ambitious goals for the first decade of the new millennium, whose fulfilment fell short of expectations in many aspects. Therefore, it was vital that the new strategy should set out realistic goals that would help us deal with existing problems and create conditions for balanced and sustainable growth. The key priorities in the Strategy include emphasis on the environment, innovations and education. In the Czech Republic (CZ), the Strategy is followed by national strategic documents that deal with, among other things, life-long learning and the potential community functions of schools and aim to implement practices that are already in place in other countries in Europe and outside Europe.

The concept of community education originated in the USA. Although community schools have the longest tradition in the USA, no unified model of community education exists in the country.

However, it is included in federal laws, education development strategies and it is supported by various foundations and regional organizations. The Coalition for Community Schools (Lauermann, 2008) is the umbrella organization. Blank et al. (2003) include among the elements of community education also the fact that specific attention is given to small rural schools. Articles that deal with community education in the United States (McConnell et al., 2002) show that it is not focused solely on primary schools, but that community schools are also among secondary schools, although the number is smaller than that of primary community schools.

In the United Kingdom, schools that implement community education are known as so-called “extended schools”. Also, in the UK the community aspect is supported by the government in the form of strategic documents that represent a methodological framework for the implementation of community education in practice, e. g. a document called *Community Learning and Development* (CLD, 2017), and by other organizations, such as the NGO ContinYou. In the Netherlands, community schools connect schools and the local communities and focus more strongly on the local environment (Heers et al., 2011). The share of community schools among secondary schools in the Netherlands is higher than among primary schools (Heers et al., 2014). In Belgium, community education is applied in both primary and secondary education and the same emphasis is put on the connection between educational environment and everyday environment (Lauermann, 2008). Community schools in Germany are known as “all-day schools” (Heers et al., 2011). There are two types of community schools. The first one is so-called open community schools that offer free-time afternoon courses and activities. The other type are so-called integrated schools that better reflect the concept of community education as it is understood in other countries. These schools provide regular and systematic education during the whole day (Heers et al., 2011). Hungary established a National Commission for Community Education to support community education, which provides methodological and specialized support for anyone interested in the community function of schools. A Hungarian Federation of Community Schools was also set up, which supports community schools and also has a coordination role. Another keyway in which community education is supported is institutionalization and legislative implementation of the position of community coordinators at individual schools (Lauermann, 2008).

Community education in countries outside Europe has its specifics, but even their certain shared features of community education can be detected. One of them is the application of the concept in rural areas that are often also on the periphery, remote and not easily accessible by transportation. And it is in areas like these where community education plays an indispensable role in making education accessible to locals (Efird, 2015; Maber, 2016; Oktari et al., 2015). The accessibility of educational activities in place of residence and their evident benefit for individuals and the community raises the awareness of other members of the community of the importance of education. Moreover, using local environment for educational activities is more attractive and appealing to members of the local community. An example of this is community education in Myanmar and Thailand. Community education in China is strongly focused on environmental issues, for which it uses local environment. It highlights volunteering and the inclusion of both parents and children in community education. All this supports local identity, which can have a positive impact on the willingness of young people to stay in the given rural area in the future. The situation is similar in Egypt and Ghana. Community education in Indonesia includes, among other things, regular meetings of members of the community and the management of the local school, activities organized by the school together with the local community using the school premises and a close cooperation between the school and the parents, also regarding extracurricular activities.

The article focuses exclusively on secondary education and more specifically on vocational agriculture education in CZ (VAS). The main goal of vocational secondary schools is to pass on to students both theoretical information and information needed for current practice as well as future practice. This mission of secondary schools, mainly those specialized in agriculture, directly connects the three abovementioned areas in the Strategy. The aim is to provide information if agriculture secondary schools are interested and assume to become community centres and increase their attractiveness.

Methodology

The main method of the primary research was individual in-depth semi-structured interviews with members from two lists. The first list included vocational schools that teach field of study 41 (Agriculture). They are VASs that teach only agricultural subjects, VASs that teach the field of study Agriculture and another 1-2 related fields of study, and VASs that teach the field of study Agriculture and another 3-5 related fields of study. The list is generated from the Register of Schools and School Facilities. The other list is generated in line with the regional division in accordance with the 2014–2020 Regional Development Strategy of the Czech Republic (hereinafter referred to as "RDS CZ"). From this list, VASs in towns with over 5,000 inhabitants were selected, which cover all types of regions (developing, stabilized and peripheral). A total of 27 interviews were conducted. The questions aimed first to establish opinions on the position of vocational agriculture schools within the system of secondary schools and second on the issue of community centres connected to VASs.

In the secondary research, the main method applied was an analysis of documents. The transnational Strategy was the basic document, together with the 2020 Strategy for Education Policy of the Czech Republic (hereinafter referred to as the "Czech Education Strategy"), which is based on the Strategy. Its general aim is to improve the results and motivation of children, pupils and students in all levels of education. At the same time, it aims at the development of the system of education based on the concept of life-long learning. The end of effectiveness of the Czech Strategy meant a new follow-up document for the next period had to be prepared. Therefore, the Ministry of Education, Youth and Sports has prepared and gradually implements the Czech Strategy 2030+. In the core of the document are two strategic goals and four strategic lines. The first strategic goal is defined as focusing education on increasing the key competencies and literacy of pupils, students and citizens, and the second strategic goal is defined as decreasing inequality in access to quality education and allowing a maximum development of the potential of pupils and students. One of the main implementation documents of the Czech Education Strategy is the Long-Term Plan for Education and the Development of the Education System in the Czech Republic for 2015–2020 (hereinafter referred to as the "Long-Term Plan"). It puts emphasis on further improvement of the quality of vocational education and on deepening collaboration between schools, employers and the Labour Offices. The Long-Term Plan also includes a chapter on Education for Sustainable Development (hereinafter referred to as "ESD"). Its goals include the creation of a functional environment for further education that will allow the acquisition of knowledge and competences in the field of sustainable development and that will systematically offer updated educational programmes for educators, the public administration, business and non-governmental non-profit organizations focused on practical implementation of the sustainable development strategy and that will ensure the accessibility of ESD for the public across the Czech Republic. In view of the preparation of the Czech Strategy 2030+, its goals and measures, a Long-Term Plan for Education and the Development of the Education System in the Czech Republic for 2019–2023 (hereinafter referred to as the "2023 Long-Term Plan") was prepared. It includes three key goals: 1) more money for high-quality work of teachers; 2) finalization of the revision of the curriculum and support for the implementation of innovated Curriculum Frameworks in schools; 3) improvement of management of schools and school facilities by making more efficient the collaboration between the headquarters and the middle management element (regional authorities).

In the field of vocational education, the principles of European cooperation are defined in the strategic framework for European cooperation in education and training. In addition to a vision of the development of education in Europe until 2020, it names four strategic goals that correspond to the comprehensive orientation of life-long learning (formal, non-formal, informal): 1) implement life-long learning and mobility; 2) improve the quality and efficiency of education and training; 3) promote equality, social cohesion and active citizenship; 4) improve creativity and innovations, including entrepreneurial skills, at all levels of education and training.

Other documents that were analysed and that are linked to the topic of the paper include RDS CZ, which sets out four priority areas, of which Priority Area 1 – Regional Competitiveness is closely connected with the topic of the paper, primarily Priority 1: Use of the Potential of Developing Areas, Priority 3: Improving the Quality of Social Environment in Developing Areas, and Priority 9: Support to Cooperation at Local and Regional Levels. The currently prepared document called Regional

Development Strategy in the Czech Republic 21+ (hereinafter referred to as “RDS CZ 21+”) builds on RDS CZ. Its aim is to carry out adequate interventions in various regions of CZ in order to fulfil the main aim of regional policy – to reduce inequalities between these regions and support sustainable development – which stands on three pillars: social, economic and environmental.

Results and Discussion

The results of in-depth interviews were analysed and, using induction, the relationships between them were generalized (Blaikie, 2000).

Opinion on the position of vocational agriculture education within the system of secondary schools

Twenty members of school management included in the survey said that compared to other secondary schools, VASs were undervalued. Fourteen of them believe that the reason is that agriculture itself is not perceived positively as it is not fully appreciated and the public views it as a sector that is not technically and technologically very developed and they judge agricultural education accordingly. Five respondents think that this view is supported by the fact that VASs are attended by less academically able students who do not have the necessary study skills and who apply for these fields because they believe they will be accepted since secondary schools have a shortage of students. There is no positive promotion of the whole agricultural sector and no raising awareness of its importance as a source of food and more (nine representatives stated this opinion). Two claimed that the situation used to be better when VASs fell under the remit of the Ministry of Agriculture of the Czech Republic. Nine representatives said that their school was “specific” (they were schools with the field of study “Gardening” and schools with technical fields of study) and a majority of them (7) consider VASs as schools with the same position as other schools. No members of the management rated the position of VASs as better in comparison with other secondary schools.

Opinions on the possibility to become a community centre

Twelve members of school management said it was a good idea, two of them pointed out that it was a good idea especially in case of smaller towns. On the other hand, the same number of representatives of schools (12) believe it is impossible for a school to become a community centre (9x no, 3x not yet). Only one school explained it was because there was an active cultural centre in the town. The last three schools are not against the idea of a community centre, but they are waiting.

Organization of social and cultural activities to support local identity, regional development, other social and cultural activities, activities to support skills for employment, sports activities, other activities

Social and cultural activities to support local identity

Twelve schools said that they were actively involved in Christmas and other markets, exhibitions where they presented their own products. Six schools do Christmas or Advent decorations in their town. Six schools organize graduation balls or balls for alumni. Students of two schools organize the St. Nicolas and the Devil visits in nursery schools. Four forestry schools take part in a very special activity, when their trumpeters open Advent events in their towns. Students of a school that apart from specialization in Agriculture also has a specialization in Social Work have internships in the Local Social Care Facility. Other schools listed the following activities: a horse-riding club, Hubertus hunting rides, a Day of the Town Patrons, Opening of the Theatre Season, the Contact festival, revitalization of fishponds, the Clean up the Czech Republic event, competitions for parents.

Social and cultural activities to support regional development

Eleven schools do not organize any activities that fall under this category. Six schools hold regional competitions. One school organizes a Day with Agriculture, one school organizes a Day with the Czech State Forests, one school organizes the event Earth Day. Specific activities include running an own confectionery (1x), a shop (1x), a cider house (1x), a distillery (1x), doing graphic design for the town (1x), a nature trail (1x), the events Kupidno Flower (1x), Autumn in Kralovice (2x), decorations for the regional grape harvest (1x).

Other social and cultural activities

The majority of schools (25) included in these activities the Open Doors Day. Eighteen schools organize various events for primary or nursery schools. They include, for example, project days, a Day for Eighth Graders, the event Nature Trail for primary schools, an agricultural club for primary schools, an Adventure Day for primary schools, a Safety Day, a Day for the Environment, a Day for Nursery Schools, a Fairy Tale Day for nursery schools, a Transportation Day for primary schools and nursery schools, workshops for children (in 3 cases), horse riding for children from primary schools and nursery schools, and a Children's Day (in 4 cases).

Activities to support skills for employment

If schools organize these activities, they are intended only for their students (in 7 cases). They include collaborations with Hobby market, Billa, a local company, local agricultural cooperatives, visits to companies and in 2 cases participation in Jobs Markets. Other schools (20 in total) say they do not have to organize these events since there is labour shortage in the fields that they offer education in and companies actively seek new employees among graduates.

Sports activities

Members of the management of selected schools (7 cases) said that their schools did not have own sports facilities and used municipal facilities. In 10 cases they do have their own facilities, but do not rent them out – one school cited security reasons. Eight schools that have a gym rent it out to a primary or nursery school, to football players or to seniors. One of the schools in the survey organizes competitions in extreme sports. A bicycle trip for disabled people is an interesting event organized by one of the schools, while another school organizes a Sports Day with a nursery school and an open-air nursery school.

Other activities

This is an area where schools have the fewest activities. Twelve schools did not mention any activity, the rest of them mentioned one activity each. They included a car training ground, a meeting of nuns and Scouts in the school gym, the participation of teachers in the Academy of the Third Age, the implementation of the project Talents for Firms, the participation in the exhibition Země živitelka, offering the premises of the Youth Centre during holidays, lectures for preservationists, renting of the shooting range, Youth Fire Fighters Club, providing lunches for a nursery school, a falconry club, organizing a conference on "Drought", maintenance of the cemetery, planting flower beds, the project A Living Hive.

Obstacles to implementation of activities?

Twelve schools included in the survey did not see any obstacles, other schools mentioned time, since they carried out own activities (in 9 cases), fear of security measures (in two cases), in 3 cases they mentioned the lack of interest on the side of the public and in one case the member of management informed that the town had enough clubs, and the involvement of school would be useless.

Like other vocational secondary schools, vocational agriculture schools face a shortage of students. The situation is made worse by the existing opinion that agriculture specializations are outdated, unattractive, unfashionable. Half of the schools consider the possibility of their school becoming a community centre a good idea, the other half have a negative opinion, citing the lack of time and personnel capacities. At the same time, the answers concerning specific ways in which this function could be fulfilled uncovered a wide range of activities across different areas, even in case of schools that responded negatively to the possibility of becoming a community centre. Schools implement activities related to life-long learning taking into account the fact that these activities are often not aimed solely at professional education, but at education that aims to improve the quality of life (e. g., hobbies). Some see this as important, especially in small towns where people know each other, meet each other and prefer activities held face-to-face. Moreover, a survey in Russia and Latvia confirmed that "the rural teachers of both countries have a closer relationship with students, they are more involved in student's life, including out-of-school life" (Jermolajeva et al., 2019, 61).

CZ could also learn from the problems that the other countries that implement community education have had to overcome. For example, in the UK the perception of teachers in society, shortage of pedagogical workers and the limited time they had to develop community activities outside the scope of everyday work caused problems in the implementation of community education (Lauermaun, 2008; McConnell, 2002). Respondents in our interviews identified the same obstacles.

A voluntary collaboration between schools, parents, local organizations and other prominent local actors is a shared element of community education. Authors share the same opinion as Harkavy et al. (2002, 52): “A community school is not just another program being imposed on a school. It embodies a way of thinking and acting that recognizes the historic central role of schools in our communities – and the power of working together for a common good. Educating our children, yes, but also strengthening our families and communities so that, in turn, they can help make our schools even stronger and our children even more successful.”

Conclusions

The results of the survey suggest a recommendation on how to increase the attractiveness of vocational agriculture schools. They show that the role of community centres is perceived as vital for vocational agriculture schools. It is a challenge for all actors in local communities.

A potential improved position of vocational agriculture schools might be triggered by a new way of financing. It solves the problem of different financing of same fields of study in individual regions, eliminates the necessity for secondary schools to accept as many students as possible regardless of their study skills in order to acquire financial resources for their activities. The rules for financing that were in place until 2020 and that took into account the number of students meant that headmasters were forced to accept also applicants that were not interested in studying. Slovakia faces the same problems. Zafková et al. (2019) inform that changes will be more easily implemented in schools with highly motivated students interested in studying.

On local level, increasing the attractiveness of agricultural education will be conditioned upon connecting schools with local actors. Support by the state authorities will also be of importance.

Only in this way the mission mentioned in Heers et al. (2011, 19) can be fulfilled: “Community schools can become not just places for learning, but also places where children grow up, where students and other members of community are happy to live.”

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Student Learning Motivation in Latvian Schools

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Abstract: Student motivation is highly dependent on the educators themselves, their personality, and the way of organizing and monitoring the study process. The students' interest will be roused and motivation increased if the teacher offers interesting information, applies new information technologies and various teaching methods. The use of information technologies in the school to acquire different subjects can attract students' interest; involve them in the study process, thus increasing their motivation to cooperate. However, the main role plays the teacher because the students are more or less motivated to do something, but the teacher's objective is to enlarge the student's world to be motivated. Mann – Whitney test, and Chi-square test were used to analyse the study results. The number of respondents is 453 students from Latvian school X and school Y. The aim of the study is to find the opinion about learning motivation in Latvian schools. To the questions: *How often do teachers use different methods to help you acquire the subject well and understand the study content?* significant prevalence was for the answer *sometimes* in the school X (p-value=0.000) and for the answer *often* in the school Y (p-value=0.011). *How clearly teachers explain the training topics and tasks?* significant prevalence was for the answer *it depends* in the school X (p-value=0.000) and for the answer *quite clearly* in the school Y (p-value=0.000). *How often are you invited to express your opinion, analyse and make conclusions during the lesson?* significant prevalence was for the answer *sometimes* in the school X (p-value=0.000) and for the answer *often* in the school Y (p-value=0.000).

Keywords: education, learning, teaching, motivation, information technology.

Introduction

In the modern world, there is a transition to modern teaching methods that involve the use of wireless technologies in the educational and pedagogical environment. Mobile and machine learning, a concept developed based on this idea, is one of the most important achievements in improving the efficiency and effectiveness of learning (Talan, 2020).

The latest technological developments and economic, redesigned and resized the role of lecturers and students in educational environments. Today education in the 21st century is facing big changes based on concepts, theories, principles, and methods. Motivation is probably the most important factor that educators can target to improve learning. Many theories have been postulated to explain motivation. According to K. Williams and C. Williams, the five key ingredients impacting student motivation are: student, teacher, content, method/process, and environment (Williams et.al., 2011).

E. Vero and E. Puko support that, *the student* must have access, ability, interest, and values in education. *The teacher* must be well trained, focus and monitor the educational process, be dedicated and responsive to his or her students, and be inspirational. *The content* must be accurate, timely, stimulating, and pertinent to the student's current and future needs. *The method or process* must be inventive, encouraging, interesting, beneficial, and provide tools that can be applied to the student's real life. *The environment* needs to be accessible, safe, positive, personalized as much as possible, and empowering (Vero et.al., 2017).

The author of the article considers that lecturers need to improve their professional competence in the study subject, including teaching methods.

Through the formative assessment process, a teacher can identify the strengths and weaknesses of students and give corrective feedback (Iqbal et.al., 2021).

In I. Juhņēviča's opinion, the student's motivation is greatly dependent on the teachers themselves, their personality and the way of organization and monitoring of the study process. Of course, the motivation of the student does not depend only on the school and the teacher; it depends on the family

to a great extent. The students' interest will be roused and motivation increased if the teacher offers interesting information, applies new information technologies and various teaching methods (Juhņēviča, 2014).

N. Vronska concluded that students make productive use of the various applications that are offered, value ICT (information and communication technology) as an instrument of permanent learning ($p = 0.000 < 0.05$) and value ICT as a medium of collaboration and social communication ($p = 0.009 < 0.05$). These results suggest the need to develop strategies to promote the effective use of technology resources for both students and teachers (Vronska, 2016).

The use of information technologies at school for the acquisition of different subjects can attract students' interest, involve them into the study process, thus increasing their motivation to cooperate. However, the main role plays the teacher because the students are more or less motivated to do something, but the teacher's objective is to enlarge the student's world in order to be motivated, for example, to focus on learning physics (How does motivation ..., 2016).

Y. Wang's research highlights the possibility of increasing student motivation to learn, when an important aspect is the popularization of mobile applications to improve necessary skills, as well as the demonstration of their importance and suitability for further inclusion in educational programs (Wang, 2022).

The aim of the study is to determine the student's opinion about learning motivation in Latvian schools.

Methodology

The number of respondents is 453 students from Latvian school X and school Y.

Research methods:

- Theoretical methods: analysis of scientific literature.
- Data collection methods: students' questionnaire.
- Data processing methods:
 - Mann – Whitney test (the null hypothesis - there is no statistically significant difference between the answers of respondents of school X and the answers of respondents of school Y).
 - Chi-square test (the null hypothesis: the frequency of respondent answers is the same).

Statistical data were analysed with SPSS computer program.

Results and Discussion

The teacher can only introduce the student to a particular branch, but if the student is not interested in it, any further development is unlikely to be (How does motivation ..., 2016).

ICT can form environment which provides an individual approach to learning and is more suitable for the individual needs of everybody (Twigg, 2001), thereby, using video in lectures it is possible to help students improve knowledge, skills and competence which are necessary for a successful study process (Vronska, 2017).

Modern technical aids help both the teacher and the student become active cooperators, because many modern technical aids enable people to show their independence and creative activity by improving the works and projects carried out (Balašova, 2014).

Good teachers can inspire students, and effective teachers continue to hone this skill by improving their understanding of student psychology and the culture of the classroom and school (Bhoje, 2015).

Effective teachers are the "human in the full sense of the word" meaning those characterized by "humor, honesty, empathy, more democratic than autocratic able to create report with students, both individually and in groups, open, spontaneous adaptable to change" (Duta et.al., 2015).

The choice of the teaching methods is successful if the methods help create such environment that:

- facilitates the students' mental activity;
- satisfies the students' cognitive interest;

- gives students an opportunity to self-realization;
- facilitates students' independence and responsible learning by using their intellectual, will abilities and skills;
- gives students an opportunity to use their knowledge and skills of communication (Maslo, 1995).

The first research question – How often do teachers use different methods to help you acquire the subject well and understand the study content? Comparison of differences between two independent samples on the first research question was statistically analyzed with the help of the Mann-Whitney test (Table 1).

Table 1

Mann-Whitney test statistics (the first research question)

Mann-Whitney U	2.000
Wilcoxon W	17.000
Z	-2.193
Asymp. Sig. (2-tailed)	0.028

Since the p-value = 0.028 is less than the significance level of $\alpha = 0.05$, the null hypothesis can be rejected. There is a statistically significant difference between the answers of the respondents of school X and the answers of the respondents of school Y.

The frequency of the respondent answers about the first research question was statistically analysed with the help of the chi-square test (Table 2).

Table 2

Chi-square test statistics (the first research question)

Answers	school X			school Y		
	Observed N	Expected N	Residual	Observed N	Expected N	Residual
Never	7	80.4	-73.4	0	0	0
Rarely	63	80.4	-17.4	6	9.5	-3.5
Sometimes	169	80.4	88.6	14	9.5	4.5
Often	145	80.4	64.6	15	9.5	5.5
Always	18	80.4	-62.4	3	9.5	-6.5
Total	402			38		
Chi-Square	268.746			11.053		
df	4			3		
Asymp. Sig.	0.000			0.011		

Since the p-value (school X) = 0.000 is less than the significance level of $\alpha = 0.05$, and the p-value (school Y) = 0.011 is less than the significance level of $\alpha = 0.05$, the null hypothesis can be rejected. Thus, can be concluded that the frequency of respondent answers is different.

Statistically significant prevalence was for the answer *sometimes* in the sample school X (88.6) and for the answer *often* in the sample school Y (5.5).

The usage of ICT promotes individualization of the study process that depends on the qualification level, skills, individual peculiarities of acquiring the learning material, students' interests and needs; as well as it promotes the change of the students' cognitive activity character to higher self-dependency, investigative activity and aspiration to independent self-improvement and self-education, in this way the student-centered approach is realized in acquiring of the study content (Dislere et.al., 2020).

Creating a teaching process, it is important to observe an individual and differential approach because students differ greatly, for example in some of them the visual perception prevails while in others the audio perception dominates, and the third ones need to read the text (Juhņēviča, 2014).

At every lesson, students need a clear learning aim and criteria for a good result as well as the opportunity to assess the achieved result. The student must understand what he or she can do and what he or she cannot succeed in yet as well as what should be done to improve the result (Čakāne et.al., 2016).

The second research question is: How clearly teachers explain the training topics and tasks? Comparison of differences between two independent samples about the second research question were statistically analysed with the help of the Mann-Whitney test (Table 3).

Table 3

Mann-Whitney test statistics (the second research question)

Mann-Whitney U	4.000
Wilcoxon W	19.000
Z	-1.781
Asymp. Sig. (2-tailed)	0.075

Since the p-value = 0.075 is greater than the significance level of $\alpha = 0.05$, the null hypothesis cannot be rejected. There is no statistically significant difference between the answers of the respondents of school X and the answers of the respondents of school Y.

The frequency of respondent answers about the second research question were statistically analysed with the help of chi-square test (Table 4).

Table 4

Chi-square test statistics (the second research question)

Answers	School X			School Y		
	Observed N	Expected N	Residual	Observed N	Expected N	Residual
Very unclearly	4	80.2	-76.2	2	7.4	-5.4
Quite unclearly	10	80.2	-70.2	1	7.4	-6.4
It depends	177	80.2	96.8	15	7.4	7.6
Quite clearly	176	80.2	95.8	17	7.4	9.6
Very clearly	34	80.2	-46.2	2	7.4	-5.4
Total	401			37		
Chi-Square	391.731			33,676		
df	4			4		
Asymp. Sig.	0.000			0.000		

Since the p-value (school X and school Y) = 0.000 is less than the significance level of $\alpha = 0.05$ is less than the significance level of $\alpha = 0.05$, the null hypothesis can be rejected. Thus, can be concluded that the frequency of respondent answers is different.

Statistically significant prevalence was for the answer *it depends* in the sample school X (96.8) and for the answer *quite clearly* in the sample school Y (9.6).

Figure 1 discusses effective teaching strategies. The self-effectiveness and critical thinking play an essential part in promoting educational achievement and achieving learning success.



Figure 1. Effective teaching strategies (Xu & Zhang, 2021)

Learning discussion is important for all study disciplines because it allows students to interpret and collect knowledge. Encourage students with varied skills to work together through the promotion of small groups or classes. Students should develop confidence and communication abilities, and the logical thinking necessary for their lives by expressing their ideas creatively and listening to others (Xu et.al., 2021).

The third research question – How often are you invited to express your opinion, analyse, and make conclusions during the lesson? The comparison of differences between two independent samples about the third research question was statistically analysed with the help of the Mann-Whitney test (Table 5).

Table 5

Mann-Whitney test statistics (the third research question)

Mann-Whitney U	3.500
Wilcoxon W	18.500
Z	-1.886
Asymp. Sig. (2-tailed)	0.059

Since the p-value = 0.059 is greater than the significance level of $\alpha = 0.05$, the null hypothesis cannot be rejected. There is no statistically significant difference between the answers of the respondents of school X and the answers of the respondents of school Y.

The frequency of the respondent answers about the third research question were statistically analysed with the help of chi-square test (Table 6).

Table 6

Chi-square test statistics (the third research question)

Answers	school X			school Y		
	Observed N	Expected N	Residual	Observed N	Expected N	Residual
Never	15	80.2	-65.2	0	0	0
Rarely	90	80.2	9.8	1	8.8	-7.8
Sometimes	186	80.2	105.8	15	8.8	6.3
Often	97	80.2	16.8	16	8.8	7.3

Answers	school X			school Y		
	Observed N	Expected N	Residual	Observed N	Expected N	Residual
Always	13	80.2	-67.2	3	8.8	-5.8
Total	401			35		
Chi-Square	253.601			21.114		
df	4			3		
Asymp. Sig.	0.000			0.000		

Since the p-value (school X and school Y) = 0.000 is less than the significance level of $\alpha = 0.05$ is less than the significance level of $\alpha = 0.05$, the null hypothesis can be rejected. Thus, it can be concluded that the frequency of the respondent answers is different.

Statistically significant prevalence was for the answer *sometimes* in the sample school X (105.8) and for the answer *often* in the sample school Y (7.3).

The use of innovative methods and information technologies at lessons help create interest in the study subject in students; however, the interest is lost quickly in case if usefulness of the taught material is missing, namely, examples of its practical application in life. If the student sees where and how the knowledge can be useful and necessary for the surrounding world, then the motivation to learn is retained. In primary schools, the students' motivation is mainly associated with the *must* say by parents, whereas in secondary schools, it depends more on the teen-agers view on the sense of the taught subject in everyday life (How does motivation..., 2016).

Attractiveness, dynamism, satisfaction, more engagement towards lessons and students' interaction and participation in the classroom are the common characteristics of an effective lesson (Iqbal et.al., 2021).

L. Skoromka has summarized the information on the interesting lesson by student's opinion based on the research work about the promotion of student learning motivation (Figure 2) (Skoromka, n.d.).

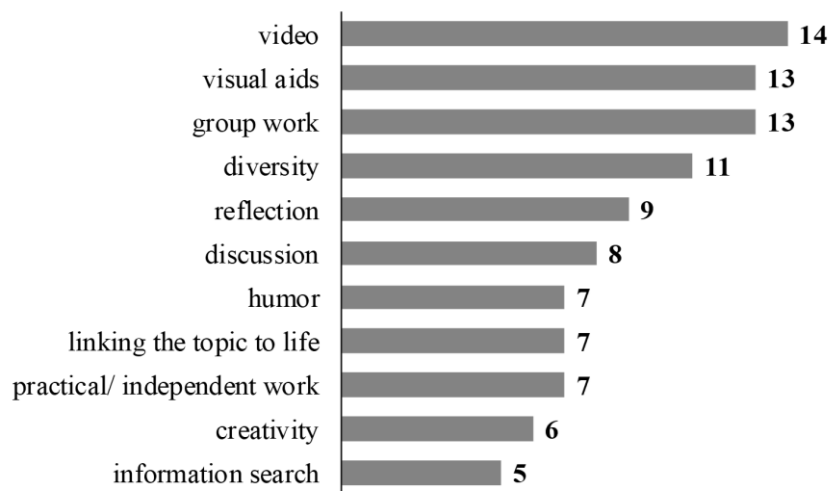


Figure 2. Interesting lesson

During practical classes teachers can use various computer programs: the capabilities of using MS PowerPoint software with sound recorders or online software Powtoon, Hot Potatoes, Canva, Postermywall. Using ICT, it is possible to improve teaching methodology, using computerized student competence tests (MentiMeter or Socrative), preparing lessons combining 3D graphics, moving images, video and audio materials. Usage of these will improve the student's learning motivation and improve the education process by cutting down the spent time for work (Dislere et.al., 2020).

An interactive whiteboard or smartphone display system that lets students see new instructional ideas will display learning content photos and videos. When technology is used to contact students while

studying physically, learning becomes more immersive and autonomous. Integrating instructional programs such as quiz-game websites in the lesson plans is an excellent way to enjoy and engage in formative evaluations (Xu et.al., 2021).

Mobile learning is a new concept, but it is rapidly evolving and expanding in the modern education segment (Hamzah et.al., 2020).

In addition, mobile learning is seen as a learning method that supports contemporary pedagogical styles, namely behavioral learning, constructivist learning, case study, collaborative, and lifelong learning (Shi, 2021).

In order to make the lesson interesting, the teacher must manage various teaching methods, be professional in his/her field, be creative, clever, joyful, and experience rich.

Conclusions

- Motivation to learn can be decisive for the young person how successful he/she will be in the future, because nowadays constantly changing conditions both in the labor market and in other fields demand to be ready to learn something new throughout the life.
- Visualization complements the teacher's talk, improves the teaching process, activates the students' cognitive activity during the lessons, thus a favourable study environment is formed that stimulates a mutual cooperation and increases students' learning motivation.
- Students are motivated by interesting teaching process that can be achieved in different ways – with new information technologies, giving examples from a real life relevant to the topic and giving practical examples or carrying out various projects and working in groups.

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Design and crafts

Factors Influencing Learning Interest in Handicraft Lessons

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Abstract: Interest in learning is a topic that has provided research material to many researchers around the world. The causes of declining learning interest in different subjects have been studied, as well as how to support and stimulate students' interest in learning. Research has shown that the main reasons for declining learning interest are the nature of the learning tasks (too easy or too difficult, not interesting) and the attitude of the teacher. Handicraft and home economics in the Estonian general education curriculum is a practical integrated subject where students can apply the knowledge they have acquired in different subjects and realise their creative ideas. Thus, it could be assumed that the subject is of interest to students. At the same time, based on student surveys and classroom observations, it can be stated that there are students in almost every class and school who are not interested in learning a craft and are not motivated to participate in the learning activities. As craft lessons differ from other lessons due to their practical nature, it was decided to investigate the learning interest in handicraft. The aim of the study was to identify the factors influencing learning interest in handicraft lessons in order to understand how handicraft teachers could support students' learning. A quantitative research method was chosen for the research, and a survey was used as a research instrument. As a result of the research, it can be stated that comparing the factors influencing learning interest in handicraft lessons with the results of other similar research, we can state that although handicraft is slightly different from other subjects due to its practical nature, the factors influencing learning interest are similar across the subjects. The interest in the subject largely depends on the age of the students and the activities of the teacher.

Keywords: learning interest, handicraft, school level, teacher's activities.

Introduction

The learning process at school should be a pleasant experience for both students and teachers. However, learning can be enjoyable for both parties if a suitable environment is created to support learning. One of the important components of a learning-friendly environment is the presence of interest – both the teacher's interest in the subject and the topic being taught and the student's interest in learning (Brophy, 2014). In other words, the teacher themselves should also be interested in both the students and in what they are teaching (Minor et al., 2002). Learning interest refers to the appreciation or positive attunement of the learning content or process, as a result of which the learner has focused their attention on the learning or learning activity (Brophy, 2014), that is, the interaction between the person and the learning content (Hidi, 2006).

Stimulating interest is the main goal in education, as interest in what is learned leads to meaningful learning, promotes long-term knowledge retention, and provides motivation for further learning (Krapp et al., 1992; Deci, 1992; Schraw et al., 2001; Hidi et al., 2006; Brophy, 2014).

At the beginning of the learning process, it is important to stimulate a positive feeling about the topic being studied and to build on the students' prior knowledge of the subject (Hidi et al., 2006). In order for the interest to deepen and change from a situational to an individual interest, the student must develop curiosity and various questions about the topic or the activity. Questions can arise if there is a prior or basic knowledge of a topic or activity (Renninger, 2000). Students may be motivated to learn, which, however, does not mean that they are interested in or enjoy a particular topic or activity (Renninger, 2000; Brophy, 2014). Many researchers on learning interest and motivation have pointed out that generating interest in learning situations activates motivation, which influences students' academic achievement (Hidi et al., 2004; Harackiewicz et al., 2016). The difference, however, is that individual interest generally refers to a person's relationship to a topic or activity and a constant desire to engage in it, but intrinsic motivation can be either a momentary or longer-term interest in a topic (Renninger et al., 2002). In the case of extrinsic motivation, the student may not be interested in the

subject, but wants to get a good grade, for example. Therefore, when motivating students, it is important to link teaching to the students' interests. Through extrinsic motivation (creating situational interest), that is, generating interest in what is being learned, students' intrinsic motivation and will to act is increased (Schraw et al., 2001).

Students' interest in what they are learning can be greatly influenced by the teacher, who creates a learning environment that is conducive to students' learning. If the relationship between teacher and students is good, students are more likely to come to class and are more likely to enjoy the lesson. This, in turn, creates an opportunity for students to be more involved in what they are learning (Lee et al., 2014). Inevitably, teachers have problems motivating students who are not interested in learning. They often do not have a clear understanding of how to increase and retain students' learning interest. However, the idea that if there is no interest, it cannot be generated and developed is not true. (Hidi et al., 2006).

The teacher should create an environment that supports learning rather than performance (Marshall, 1994). Learning interest may also be affected by the grading method used in the subject. More attention should be paid to what the student learned and what the student's development has been. According to Brophy (2014), the teacher should emphasise that it is important to understand what is being learned, not just to try to give the right answers or to complete tasks.

The aim of the research was to find out the factors influencing the learning interest in handicraft lessons in order to understand how a handicraft teacher could support students' learning.

Methodology

A quantitative research method was chosen to conduct the research in order to obtain objective empirical data on the learning interest in handicraft lessons. The survey was used as a research tool. The questionnaire was created in Google Forms. The questionnaire consisted of nine blocks of question with a choice of answers and one open-ended question where the respondent could express their views in their own words.

Responding to the questionnaire was voluntary and anonymous, only the respondent's background information (gender, school, class, and mother tongue) had to be indicated. The second part of the questionnaire was designed to find out about the students' experiences of handicraft lessons so far, how the students themselves assess their learning interest in handicraft lessons, and what factors might influence their learning interest. In order to investigate the actual experience, questions were designed with a Likert scale of response options to investigate how often the different statements related to learning interest in handicraft lessons were true. In the third part, there were questions that built on the statements made in previous research about the factors influencing learning interest: whether they increase, do not affect, or reduce students' learning interest in handicraft lessons. Also included in the third part of the questionnaire were a number of statements where the respondent was able to select the ones that might make them less interested in learning in a handicraft lesson.

Test surveys were also conducted before the questionnaire was sent to schools. The questionnaire was first answered by a 6th grade student, and provided information on how well the questions were understood by the students. The revised questionnaire was then tested on five adult volunteers, whose feedback was used to make further changes to the questionnaire.

The five schools participating in the research were randomly selected with the aim of obtaining data on the experiences and perceptions of students' learning interests in handicraft lessons in different schools. 215 students answered the questionnaire: 179 girls and 36 boys who had chosen handicraft and home economics as their field of study. Among the students who participated in the study, there were 106 students in grades 4–6 (second school level) and 109 students in grades 7–9 (third school level). To ensure anonymity, schools were coded and provided with a combination of letters and numbers for analysis (School 1, School 2, School 3, School 4, School 5).

For statistical analysis, all questionnaire responses from the Google Forms environment were moved to a Microsoft Excel spreadsheet. As a single spreadsheet, it was possible to clean up the data and also to process the original data. In order to be able to analyse the data, it was necessary to quantify the verbal answers. Numerical indicators were used to look at both averages and proportions of respondents.

Results and Discussion

Handicraft lessons in Estonian general education schools start in the second school level (4th grade), so one of the factors influencing learning interest may be the transition from the first to the second school level. Changing school levels brings a lot of changes, as in the first school level it is mainly the class teacher who deals with the students, but in the second school level each subject has a different teacher, the demands are higher, and teachers cannot always allow for choice. Changing school levels also brings changes in the organisational part of learning, it is important to support students of the first school level to adapt to the new situation, not to lose confidence, and to understand that they can cope with what they are learning (Brophy; 2014).

A comparison of the data by school level revealed differences in the way students' previous experiences of handicraft lessons were assessed, as well as in the factors influencing their learning interest. Comparing the level of learning interest of students in the second and the third school levels, it can be seen that in higher grades the proportion of students with little or no learning interest is higher (see Figure 1). In the 4th and 5th grades, when the curriculum has changed and new technologies and tools have been added compared to the first school level, a very large proportion of students have a high level of learning interest and there is no lack of interest in handicraft lessons. From the 6th grade, interest in learning handicraft declines significantly. The fact that learning interest changes over time and decreases in the second and third school levels was also confirmed by E. Alliksaar (2019) in his research among Estonian students. She justified this on the grounds of the ageing of the students.

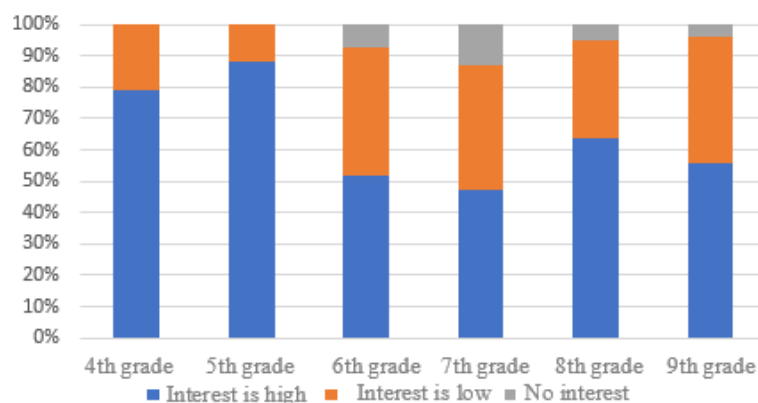


Figure 1. Scale of learning interest in handicraft lesson by class.

Younger students are more likely to perceive tasks as interesting and relevant to their daily lives. For them, the feedback from the teacher is almost always pleasant. However, students of the third school level are less likely to perceive these factors. Compared to students of the third school level, students of the second school level are slightly less likely to be able to choose what to do for practical work in handicraft lessons. However, the freedom granted to students of the third school level is understandable as they have come across a wider range of technologies and experiences.

There are greater differences in how students at the two different school levels perceive the factors that influence their learning interest in handicraft lessons and how they do so (see Table 1).

Table 1

How the following factors affect interest in what is taught in handicraft lessons, comparison by school level

Factors influencing the learning interest	Second school level n-106			Third school level n-109		
	increases interest	does not affect	reduces interest	increases interest	does not affect	reduces interest
support at home	42%	58%	0%	35%	64%	1%
the handicraft teacher assigning a practical object	38%	50%	12%	17%	55%	28%

Factors influencing	Second school level n-106			Third school level n-109		
prior knowledge	60%	36%	4%	56%	41%	3%
learning a new topic	68%	26%	6%	37%	54%	9%
the handicraft teacher's attitude towards the students	65%	33%	2%	59%	37%	4%
feedback from the handicraft teacher	66%	34%	0%	67%	32%	1%
explanation of the topic by the handicraft teacher	57%	40%	3%	56%	40%	4%
playful learning activities	67%	30%	3%	50%	46%	4%
entering basic school from primary school	39%	59%	2%	25%	70%	5%
listening to music during practical activities	62%	33%	5%	71%	26%	3%
Grading	41%	51%	8%	25%	63%	12%

Based on the averages of the responses of students of the second school level, it can be pointed out that they feel that the factors presented in the survey have a positive impact on their learning interest. However, these indicators are sometimes lower in the case of students of the third school level. Compared to students of the second school level, a higher proportion of students in the higher grades consider that the factor suggested by the survey does not influence or even reduces their learning interest.

More than half of the students in both groups think that the following factors could increase their learning interest: relevant prior knowledge or skills, teacher's feedback and attitude towards the students, handicraft teacher's explanation, playful learning activities, listening to music during practical activities. A comparison of grades shows that the impact of playful learning activities on learning interest decreases over time, and that there are significantly fewer students in the final years of basic school who find that they could increase their interest. The majority of the respondents of the second school level have also mentioned the learning of a new subject in crafts as an uplifting factor, but students of the third school level stated that this does not affect their learning interest. For students at both levels, the following factors were similar and did not affect their interest in handicraft lessons: support at home, entering basic school from primary school, grading in handicraft lessons, and a practical object to be made, as assigned by the handicraft teacher. At the same time, in the column of factors that reduce interest, the top factor for students of the third school level (28% of respondents) is when the teacher assigns what has to be done as a specific practical object, that is, students at this age already value freedom of choice (see Table 1). However, interests and preferences cannot always be taken into account, there may also be learning goals that require the student to do something that makes them reluctant (Brophy, 2014).

Difficult tasks and teachers not having the time to listen to students were the factors most often cited by students at both levels as making learning less interesting (see Figure 2).

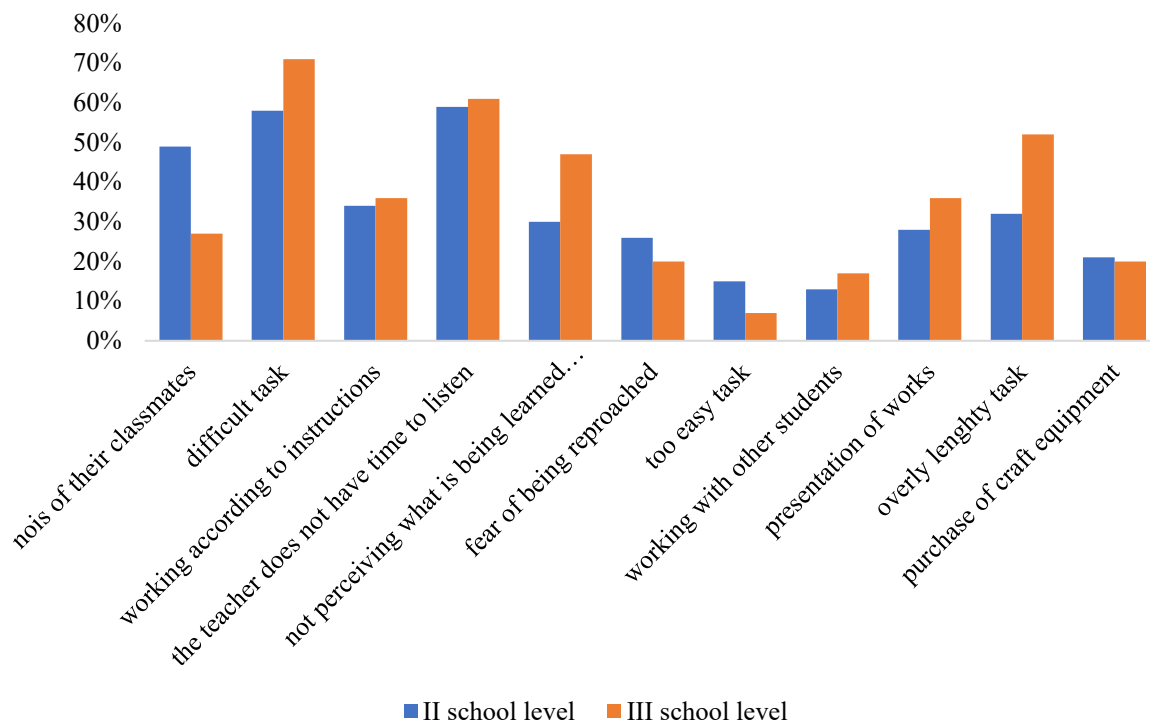


Figure 2. Factors reducing learning interest.

As it can be seen from the figure, more students in the third school level than in the lower school levels stated that their learning interest is also reduced by overly lengthy tasks and by not perceiving what they were learning as necessary. Students of the second school level find to a greater extent that the constant noise of their classmates also reduces their learning interest in handicraft.

When entering basic school from primary school, a student in an Estonian school should be able to choose whether they want to study handicraft and home economics or technology. The goal is for the student to learn the technologies that interest them the most. However, 58% of all respondents (n-215) indicated that, when they entered the second school level, they could not choose which subject they wanted to study, whether handicraft and home economics or technology, until the end of 9th grade. At School 5, students perceived to a greater extent that they were able to choose the subjects they wanted to study when they entered the second school level from the first school level. Compared to other schools, the level of learning interest is also higher in School 5 (see Figure 3).

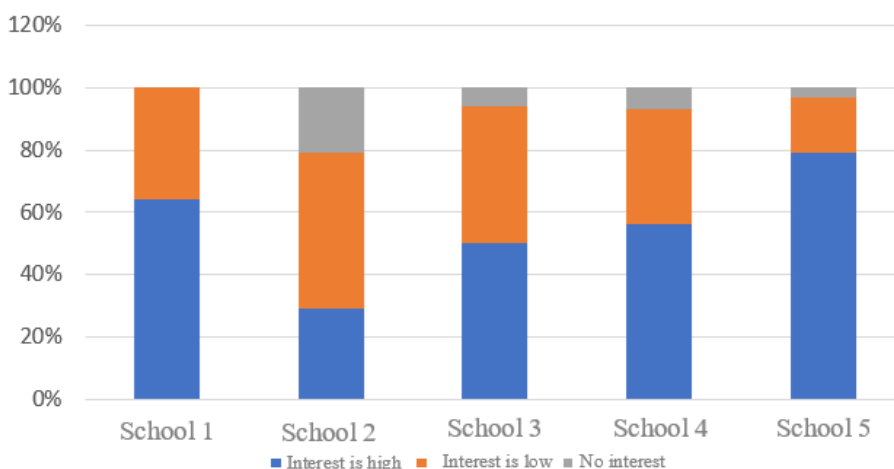


Figure 3. Level of learning interest in handicraft lessons, comparison among schools.

The experiences of handicraft lessons for students from different schools were in many ways similar when looking at the averages, but, at the same time, there were also small differences (see Table 2).

Table 2

Factors that increase learning interest in handicraft lessons. Comparison among schools

Factors increasing the learning interest	School 1	School 2	School 3	School 4	School 5
support at home	55%	22%	25%	36%	49%
the teacher assigns the object	36%	21%	25%	25%	31%
prior knowledge or skills	82%	64%	50%	56%	60%
learning a new topic	64%	36%	44%	43%	70%
teacher's attitude towards the students	73%	43%	41%	67%	70%
feedback from the handicraft teacher	82%	64%	50%	64%	76%
teacher's explanation	73%	43%	36%	59%	49%
playful learning activities	55%	43%	53%	61%	63%
learning from primary school to basic school	55%	7%	19%	29%	43%
listening to music	46%	57%	61%	75%	66%
grading	18%	28%	31%	31%	40%

In School 1, students are more positive than respondents from other schools in terms of factors influencing the learning interest in handicraft lessons. More than half of the respondents have indicated that many of the factors identified in the survey increase their learning interest in handicraft (see Table 2). Compared to other schools, however, this school has the highest number of students (36% of the respondents) who believe that making an object assigned by a teacher can also increase learning interest. It is important to use the student's persistent individual interests to develop other skills. If the teacher is aware of the topics or activities that the student likes, they can take them into account and thereby support the student's learning activities (Renninger et al., 2002). All students are different and also their interests and preferences are different. Knowing the interests and preferences of students, we can offer them choices and autonomy, and we must ensure that the learning goal is achieved. When creating learning content, students' existing interests and prior knowledge should be taken into account and, where possible, linked (Harackiewicz et al., 2016).

Research has shown that a moderate prior knowledge supports learning interest, but a very high or a very low prior knowledge can inhibit it (Schraw et al., 2001). This was also reflected in the survey, and was particularly evident in the responses of students in School 2: more than half of the respondents in that school felt that prior knowledge increased learning interest in handicraft lessons (64%), but so did the teacher's feedback (64%) and listening to music during practical activities (57%).

The importance of prior knowledge was also evident in the responses from School 3. Listening to music during practical activities (61%), playful learning activities (53%), and the feedback from the handicraft teacher (50%) were also cited by more than half of the students from School 3 as factors that increased their learning interest.

At School 4, the majority of the surveyed students indicated that listening to music during practical activities (75%), the teacher's attitude towards the students (67%), the feedback from the handicraft teacher (64%), playful learning activities (61%), the teacher's explanation (59%), and prior knowledge (56%) could most increase their learning interest in handicraft lessons. In School 5, students identified the feedback from the handicraft teacher (76%), learning a new topic (70%), the teacher's attitude towards the students (70%), listening to music (66%), playful learning activities (63%), and prior knowledge or skills (60%) as factors that increase learning interest in handicraft lessons.

Differences in students' opinions between schools are largely due to the professionalism of the teacher. Seven important aspects are identified as the characteristics of an effective teacher: leadership and supervision skills, student-centred teaching, ethical and professional behaviour, knowledge and

enthusiasm for both the subject and the students. The teacher's cognitive abilities are important: encouragement and multifaceted support for students, patience, honesty and fairness, caring, flexibility, and self-analysis (Minor et al., 2002). If the teacher explains the new part well, takes into account the students' wishes, gives objective feedback, and is friendly towards the students, this will have an impact on their learning interest in the subject.

Conclusions

Comparing the factors influencing the learning interest in handicraft lessons with the results of other similar research, we can state in this research that although handicraft is slightly different from other subjects due to its practical nature, the factors influencing learning interest are similar across subjects.

Students of both the second and the third school level were of the opinion that their learning interest could be increased most by their prior knowledge or skills, the teacher's feedback and attitude towards the students, the handicraft teacher's explanations, playful learning activities, and listening to music during practical activities.

- A comparison of school levels showed that learning a new topic and interest in playful learning activities had a positive impact on the learning interest of students of the second school level in handicraft lessons. It was also found that students of the second school level like it when the teacher assigns the object to be made in the handicraft lesson, while students of the third school level prefer to make their own choices.
- The important role of the teacher in supporting the student's learning interest was confirmed. The teacher's feedback, explanations, and attitude towards the students are factors that increase learning interest. Among the factors that impact negatively is the teacher not having time to listen to the students, overly complex and lengthy tasks, and not perceiving what the students are learning as necessary. The importance of the role of the teacher was also evident when comparing the responses of students from different schools.
- The majority of students did not perceive any change in their choice of subject when changing school level. At the same time, there is no overview of the extent to which students have had the opportunity to choose between different fields of study.

Unfortunately, as students from only five schools took part in the survey, the data cannot be generalised. The topic deserves to be addressed in a broader way, in order to be able to provide teachers with guidelines for more effective teaching.

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Innovative Trends in Ethno-Costumology in the Modern Theater Process

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Abstract: This article examines the topicality of ethno-costumes in the context of the modern theatrical process. The aim of the study is to conduct a theoretical and methodological study of the problems of ethno-costumeology in the context of the modern theatrical process. The scientific and theoretical methodology of the research include the theoretical foundations of ethno-costumes, concepts of the modern theatrical process, methodological aspects of ethno-costumes, innovative directions of ethno-costumes, artistic principles of creating an ethnocostume. Scientific and theoretical methods were used: socio-cultural, historical, semiotic, ethnographic, formal-stylistic analysis, ekphrasis, attribution of an ethnic costume, observation, interpretation of an ethnic costume in the theatrical process. The practical methods: research of innovative technologies in the design of ethnic costume in the context of the modern theatrical process, which make up various types of 3D modelling and visualization. The result of the study is: the application of the obtained scientifically grounded methodological foundations in the method of designing an ethnic costume in the production process of the Kazakh Drama Theater named after S. Seifullin in the city of Karaganda. The significance of the results is in the study and identification of methodological aspects in innovative areas of ethno-costumology within the framework of the modern theatrical process.

Key words: ethno-costumology, theatrical process, innovations in costume design, theatrical costume, ethnic costume.

Introduction

The problem of ethno-costumeology in the context of the modern theatrical process is determined by the reliability of the translation of traditional samples of ethnic culture with the synthesis of modern methodological approaches in visualizing the cultural characteristics of the national identity of personages. Consideration of the problem is conditioned by factors: socio-cultural development, historical and cultural, aesthetic, semiotic, scientific and pedagogical and theoretical and methodological foundations of teaching ethno-costumeology. The topicality of the research is the disclosure of innovative tendencies in methodological approaches when visualizing the cultural characteristics of the national identity of characters in the theatrical process. The references to relevant previous work are: scientific and theoretical foundations of the research include the theoretical foundations of ethno-costumes, the concept of the modern theatrical process, methodological aspects of ethnocostemology, innovative directions of ethno-costumes, artistic principles of creating an ethnocostume. The study aim is to develop and theoretically and methodologically substantiate ethno-costumes in the context of the modern theatrical process.

Methodology

The hypothesis of the research is in the development and theoretical and methodological substantiation of ethnic suits, will make it is possible to synthesize innovative methods in the practice of visualizing the cultural characteristics of the ethnic identity of the costumes of personage in the context of the modern theatrical process.

The following tasks were set for the research:

- to analyze and generalize the material on semantics, genesis, evolution, status hierarchy of ethnic costumes, their conceptual content, semiotic system and integration into modern theatrical process;
- to formulate and substantiate the concept of ethno-costumology; to develop a system of theoretical provisions on the essence, structure, functions of ethno-costume;

- to investigate the specifics and determine the results of existing approaches to teaching ethnic costume at all levels of professional and pedagogical scenographic education;
- to define the role of ethno-costumology in the modern theatrical process.

The research question was put forward – what are the peculiarities of the innovative trends in ethno-costumology in the context of the modern theater process?

The qualitative content analysis of scientific literature was carried out in the research, as well as an empirical study was conducted using a survey of respondents. The prospective study of the participants covered many areas of costume design. Three groups of respondents took part in the survey: teaching researchers, industrial specialists, creative artists, all of which from different age groups (25-37, 38-50, 51-65) and different gender (male and female). Teaching researchers define theoretical foundations of ethno-costumes and concepts of the modern theatrical process; industrial specialists reveal methodological aspects of ethno-costumology and innovative technologies in the design of ethnic costume; creative artists maintain the artistic principles in creating an ethnic costume. All survey questions are open-ended. The survey studied the explanation of research methods, scientific apparatus and methodological foundations of research, functions of a costume, factors, and innovative technologies of ethno-costumology.

Microsoft Excel data processing program was used for processing and analysis of the obtained data.

The research base consists of 110 costume specialists of different age groups from different fields of costume research (Table 1).

Table 1

Respondents Profile

Age	Number (n)	Percent (%)
23-35	14	12.7
36-50	90	81.8
51-65	6	5.5
Total	110	100.0

The largest number of respondents were of age 36 to 50, having an average length of work experience of 25 years. This shows that the majority of respondents have work experience with theory and practice of costumology and they have gained competencies of innovative trends in ethno-costumology in the context of the modern theater process.

Theoretical and methodological foundations of the research

The theoretical foundations of ethno-costumology are formed by socio-cultural, historical, semiotic and ethnographic factors. The study of the ethno costume in the context of the modern theatrical process is conditioned by the formal and stylistic analysis based on ekphrasis, attribution of the ethno costume, observation, interpretation of the ethno costume. Research of scientists' work (Battistini, 2005; Biraglia, Kadile, 2017; Bronwyn, 2000; Jane, Graham, 2001; Jill, 2013; Giorgi, Lockwood, Glynn, 2015; Guseynov, Yermilova, 2003; Kalēja-Gasparoviča, 2012; Koliyeva, Gobeyeva, Grkikyan, & Getmantseva, 2021; Makarevičs, 2017; Mečņika, Hoerr, Krieviņš, Schwarz, 2014; Melaya, 2015; Mikheyeva, 2009; Naidu, Chand, Southgate, 2014; Smith, 2013; Yefimova, 2012; Zhanguzhinova, 2018) on the theoretical foundations of ethno-costumes, it was possible to reveal that: an ethnic costume in the modern sense is presented as an artifact, a product of creative consciousness and activity, organically including elements of a traditional costume, filled with cultural meanings, symbols and images. The functional and semiotic polysemy of clothing represents a broad field of research, in which the ethnic symbolism of the costume is of particular interest. The complex processes taking place in the ethnic environment, and, as a consequence, in the costume complex of ethnic groups in the era of modern times, lead to a certain conceptual confusion that arises when describing the costume. The most commonly used in domestic science is the concept of "folk costume" used in scientific works (Bronwyn, 2000; Jill, 2013; Guseynov, Yermilova, 2003; Koliyeva, Gobeyeva, Grkikyan, & Getmantseva, 2021; Melaya, 2015; Mikheyeva, 2009).

Based on the conducted research, it can be concluded, that the costume has the following functions: *gender-age, social, class (group), professional, regional, ritual-religious and artistic-aesthetic*.

The formation of new forms and types of ethnic costumes is due to a change in socio-cultural and traditional aspects based on the improvement of human activities. Melaya (2015) believes that the constant development of innovative technologies encourages costume designers to create innovative forms, apply new methods in the modelling and design of clothing, to meet consumer demand in a timely manner.

Thus, the study of the theories of various scientists made it possible to reveal that ethno-costumology is associated with the *organization of human activity*. In the context of the modern theatrical process, ethno-costumology reflects the reproductive activity of the semiotic image of a character - a copy of a certain ethnos. In the creative theatrical process, working with the innovative tendencies of the ethnic costume reveals *productive activities* aimed at obtaining an objectively new or subjectively new result (Arnkheim, 2012; Biraglia, Kadile, 2017; Chauhan, 2015; Jung, 2003; Kalēja-Gasparoviča, 2012; Kamali, Javdan, 2012; Makarevičs, 2017; Reynolds, Hart, Mickiewicz, 2014; *Robert, 2004*; Solso, 2003; Spencer, Kirchoff, White, 2008; Yin, 2009; Zulaikha, Brereton, 2011).

Research of scientists' works on the *concepts of modern theatrical process*: Chauhan (2015), Chua, Roth, Lemoine (2015), Culture... (2014), Florida (2003), *Jane, Graham (2001)*, Jung (2003), Reynolds (2007), Zulaikha, Brereton (2011) made it possible to reveal that: there is an inextricable connection between the creative and organizational-economic problems of theatrical art [6, c.138].

The study of scientists' works on the concepts of the modern theatrical process made it possible to reveal the conditionality of factors: internal, external and scenographic dialectical concept. The innovative tendencies of the ethnocostume can be implemented by the methods of *virtual art, minimalism, high-tech production, automated workplace (AWP)*. To integrate the concepts of the modern theatrical process, are need:

- modernization of the accumulated scientific knowledge about the concepts of the modern theatrical process;
- evolution of systems of scientific knowledge and information capacity of scientific theories with an increase in the degree of accuracy, validity of knowledge;
- increasing the methodological and methodic arsenal;
- synthesis of pluralism of object, practical, socio-cultural and ideological methodologies.
- growth of differentiation of modern scientific knowledge, scientific methods and concepts, interdisciplinary, problematic and complex research in the field of theatrical process.

Researching theories of Bronwyn (2000), Guseynov, Yermilova (2003), Zhanguzhinova (2018) on the *methodological aspects of ethno-costumology*, it was possible to identify a *universal design methodology* containing the following stages: understanding the research problem, analysis, defining the principles and means of solving the problem, visualizing a formal image (design), detailing.

The methodological process of ethnocostimology can be divided into four main stages:

1. review and information;
2. theoretical and analytical - research part;
3. synergy and interaction;
4. design and communication - the practical part.

The study of the methodological aspects of ethno-costumology made it possible to identify:

1. four stages of the methodological process of ethno-costumology (overview and information; theoretical and analytical - research part; synergetic; design and communication - practical part);
2. methodological approaches (value, holistic, spatial and environmental);
3. methods in creating an ethnic costume.

Ideological and conceptual methods for solving the problem (brainstorming, brain siege, meetings of pirates);

4. heuristic methods (associations, analogies, guiding tasks, empathy);
5. design methods (free expression of function, neology, hyperbole, detailing, decomposition);

6. constructive and technological methods (bionic, innovative technologies, anthropotechnics, transformation, deconstruction, inversion).

Research of scientists' works on innovative technologies in the design of ethnic costume: allowed to identify the main directions in the design of clothing, including stage costume - sensory reflection, neurocommunication, 3D modeling and visualization technologies. The introduction of innovative techniques and technologies in the design of a stage costume, in particular an ethno costume, is based on research by scientists in the field of psychology, psychophysiology, marketing, management, artificial intelligence and innovative engineering, including aero and space research. The works of Chauhan (2015) and Jung (2003) are devoted to studies of European scientists in the field of neurocommunication. B. Schmitt, who considered the issue of *neurocommunication and sensory reflection* in the framework of empirical marketing. Griffiths (2015) also studied sensory marketing within the framework of consumer emotion management technology. Adaptation of the transition from traditional clothing design ideas to innovative technologies is considered in the works: Biraglia, Kadile (2017); Chua, Roth, Lemoine (2015), Culture Label Agency... (2014), Florida (2003), Kalēja-Gasparoviča (2012), Koliyeva, Gobeyeva, Grkikyan, & Getmantseva, (2021), Mečņika, Hoerr, Krieviņš, Schwarz (2014), Melaya (2015), Naidu, Chand, Southgate (2014), Rae, (2007), Reynolds (2007), Reynolds, Hart, Mickiewicz (2014), Zulaikha, Brereton (2011).

The influence of the psychological aspects of the unconscious as a fundamental independent sphere of the mental life of a person and society were investigated in the works of Chauhan (2015), Jane, Graham (2001), Jung (2003), Kamali, Javdan (2012), Makarevičs (2017), Solso (2003). Research questions of "sensorics" accentuate the interest of scientists on the influence of psychological aspects of the unconscious on the perception of information by the five senses, through sight, hearing, taste, smell and touch. Research in the field of psychology and neurobiology has identified effective tools for influencing the viewer through visual perception, based on the Harvard model, according to which more than 90% of human mental activity, including emotions, occurs in the subconscious. Researchers in the field of visual arts V.P. Arnkheym (2012), Gage (2000) identified two categories of visual perception: "*perceptual*", through which perception occurs, and "*pictorial*", through which the artist embodies his thought in the material of art. Thus, visual perception is in the formation of "perceptual concepts", just as artistic creativity is "the formation of adequate pictorial concepts".

A visual neurocommunication tool using the patented Zaltman metamorphic method - ZMET, is qualitative research in the field of innovative technologies, widespread in many areas of entertainment services. The development trend in the field of costumed performances (circus shows, festivals, carnivals, theatrical performances) in scenography of theatrical costume also has the Zaltman method - ZMET (Griffiths, 2015; Koliyeva, Gobeyeva, Grkikyan, A.O. & Getmantseva, 2021; Melaya, 2015).

Along with visual *neurocommunication tools*, the *color correction method* is also widespread, to which the works of Kamali and Javdan (2012) are devoted. Color correction is one of the methods of qualitative research, which consists in the fact that according to the social parameters of a person, one can predict his reaction to various color combinations (Makarevičs, 2017; Mečņika, Hoerr, Krieviņš, Schwarz, 2014; Melaya, 2015; Rae, 2007). The sensory features of the meaningful artistic forms of the character's image on the stage, which include - word, sound, line, spot, color, are in the focus of attention of sections of scientific knowledge such as phenomenology, ontology, semiotics, semantics and pragmatics. Epistemological orientation in relation to color contributes to the disclosure of many answers to questions about the impact of color through the laws of metaphysics.

Thus, the study of visual instruments of neurocommunication and sensory reflection made it possible to identify a semiotic system of visualization of the character's image for ethno-costumology in the theatrical process.

The research of scientists' works contributed to the identification of *innovative technologies in the design of ethnic costume*: costume in the context of the modern theatrical process (Makarevičs, 2017; Mečņika, Hoerr, Krieviņš, Schwarz, 2014; Melaya, 2015; Rae, 2007), Pauline van Dongen in the field of *3D modelling and visualization technology*: SLS - selective laser sintering; SLA - laser stereo lithography; PolyJet and PolyJetMatrix; MJM - technology based on multi-jet modelling using polymer material; FDM - Molten Filament Deposition Modelling. Ruff's 3D printed adaptive wearable

material has been widely used in the fashion industry, stage performances and various other performances.

Taking into consideration the different definitions and approaches to innovative technologies in the design of ethnic costume presented in the theoretical part of this study, this section explores the meaning of artistic principles in the creation of an ethnic costume and costume creation' perspectives in theatre and cinema performances.

The fashion industry has influenced all areas of the visual arts. Innovative trends in 3D modelling in the context of the modern theatrical process are prevalent in theatrical productions. One notable example is the debut of costume designer Tomáš Dabert for Wolfgang Riehms opera "Conquest of Mexico" for the Royal Theatre of Madrid in 3D. The artist's goal was to synthesize elements of the ethnic costume and innovative technologies. The artist's task was to refresh the classic stage production and create a 3D model and 3D print of the armour of Native Americans and Spanish conquistadors (Griffits, 2015).

The use of innovative trends in 3D modelling is widely spread in the context of modern film processes. With the rapid development of the film industry, the widespread use of 3D modelling of costumes for films has acquired particular relevance. The audience's orientation towards fantasy, spectacular films is growing and popularized by the commercialization of computer games, forming new popular ideals of superheroes and images of characters. Costume designer Judianna Makovsky's goal in Marvel's Black Panther was to convey a costume that resembles something of a feline body. The task of the costume designer was to convey a certain ethnicity to the world - Wakanda. The Black Panther costume is a combination of a practical costume and visual effects, including weaving from a net similar to chain mail, made of the fictional metal "vibranium" (Griffits, 2015; Koliyeva, Gobeyeva, Grkikyan, & Getmantseva, 2021; Melaya, 2015; Naidu, Chand, Southgate, 2014).

Thus, research into innovative technologies in ethnic costume design has found application in all fields of visual arts, including theatrical stage costume design. Based on the studied material, it was possible to identify the main directions of 3D modeling and visualization: SLS - selective laser sintering; SLA - laser stereolithography; PolyJet and PolyJetMatrix; MJM - technology based on multi-jet modeling using polymer material; FDM - Molten Filament Deposition Modeling. Ruff found wide application of 3D-printed adaptive wearable material in the fashion industry, stage performances and in various other performances (Griffits, 2015; Koliyeva, Gobeyeva, Grkikyan, & Getmantseva, 2021; Melaya, 2015; Naidu, Chand, Southgate, 2014).

Researching theories Guseynov, Yermilova (2003), Ignat'yev, Nikitin, Nikitin, & Reshetnikova, (2005) allowed to reveal the *artistic principles in the creation of an ethnic costume*.

Simple shapes are due to the ergonomic functions of the cut - straight-cut and oblique clothes, tunic-like, curved cut lines are consistent with the anatomical structure of the human figure (Melaya, 2015; Mikheyeva, 2009; Rae, 2007; Zhanguzhinova, 2018).

Research results and discussion

Due to the research, each element of embroidery and decoration has a semantic meaning, carries a semantic load and performs functions in a costume (15% teaching researchers refer to the gender-age, social, class (group); 30% industrial specialists apply to the professional, regional functions; 55% creative artists see connections with ritual-religious and artistic-aesthetic functions).

Thus, allowed to reveal that: *ornamentation and decoration of the ethnic costume* - harmonized with the shape and cut of both the details and the entire costume as a whole. The holistic approach to costume decoration is due to the system "man - environment - design" (Melaya, 2015; Mikheyeva, 2009; Rae, 2007; Chauhan, 2015; Jane, Graham, 2001, Jung, 2003; Kamali, Javdan, 2012; Makarevičs, 2017; Solso, 2003).

The methodological research reveal that 78% teaching researchers refer to value, holistic; 18% industrial specialists emphasize environmental; 4% creative artists spatial) approaches, which connected with the organization of human activity (reproductive and productive) and the costume'

functions of (gender-age, social, class (group) in 51-65 age; professional, regional in 36-50 age; ritual-religious and artistic-aesthetic in 23-35 age) groups of respondents.

The result of analysis define that: *the compositional logic of the ethno costume* is determined by the placement of the pattern on the product by the expediency and subordination of the general ideological and conceptual task (Melaya, 2015; Mikheyeva, 2009; Rae, 2007; Zhanguzhinova, 2018).

The research of the methods in creating an ethnic costume showed that 73% teaching researchers define ideological and conceptual methods for solving the problem (brainstorming, brain siege, meetings of pirates) and heuristic methods (associations, analogies, guiding tasks, empathy); 18% industrial specialists think that constructive and technological methods (bionic, innovative technologies, anthropotechnics, transformation, deconstruction, inversion) much effective; 9% creative artists indicate design methods (free expression of function, neology, hyperbole, detailing, decomposition). These allowed concluding that differentiation of color preferences in a costume depends on color gelstates and functions in a costume (gender-age, social, class (group) in 23-35 age; professional, regional in 51-65 age; ritual-religious and artistic-aesthetic in 36-50age) groups of respondents.

The research allowed revealing, that: *color solutions of the ethnic costume* are determined by visual tools of neurocommunication and color correction methods (Arnkhym, 2012; Battistini, 2005; Gage, 2000; Kaleja-Gasparoviča, 2012).

Thus, the study of artistic principles in the creation of an ethno costume made it possible to identify simple forms, ornamentation and decoration of an ethno costume, the compositional logic of an ethno costume, color solutions of an ethnic costume in the innovative trends of ethno costumology in the context of the modern theatrical process.

As a result of the conducted research, the concept of research was formulated and substantiated: *ethnocostumology is based on interdisciplinarity and synthesis of systemic components of the essence, structure, functions of ethnic / folk / national costume. Within the framework of the modern theatrical process, the task of the ethno-costume is to broadcast traditional samples of ethnic culture and synthesize modern methodological approaches in visualizing the cultural features of the national identity of the characters in the Scenography. The system of theoretical provisions on the essence, structure, and functions of an ethnocostume contains research methods, methodological foundations of research, costume functions, factors, directions in costume design, artistic principles, and the introduction of world experience in innovative areas of ethnocostumology.*

Conclusion

The study of innovative trends in ethnocostumeology in the context of the modern theatrical process made it possible to determine the research methods: socio-cultural, historical, semiotic, ethnographic, formal-stylistic analysis, ekphrasis, ethnocostume attribution, observation, interpretation of an ethnocostume in the theatrical process.

And also to formulate the scientific apparatus and methodological foundations of the research, including: theoretical foundations of ethno-costumes, concepts of the modern theatrical process, methodological aspects of ethno-costumes, innovative technologies in designing an ethnic costume, artistic principles in creating an ethnic costume.

The study revealed that the costume has the following functions: gender-age, social, class (group), professional, regional, ritual-religious and artistic-aesthetic. The formation of an ethnic costume is associated with the organization of human activity (reproductive and productive).

The study of the works of scientists on the concepts of the modern theatrical process made it possible to identify the conditionality of factors: internal, external and scenographic dialectical concept.

Innovative trends in the creation of an ethnic costume can be implemented by methods: virtual art, minimalism, high-tech production, automated workplace (AWS). The methodological process of ethnocostimology can be divided into four main stages:

1. review and information;
2. theoretical and analytical - research part;

3. synergy and interaction;
4. design and communication - the practical part.

The research process of ethno-costumology includes methodological approaches: value approach, holistic approach, spatial-environmental approach.

On the basis of the theoretical study, the following methods were identified in creating an ethnic costume:

1. Ideological and conceptual methods for solving the problem: brainstorming, brain siege, meetings of pirates.
2. Heuristic methods: associations, analogies, leading tasks, empathy.
3. Design methods: free expression of function, neology, hyperbole, detailing, decomposition.
4. Constructive and technological methods: bionic method, innovative technologies, anthropotechnics, anthropotechnics, transformation, deconstruction, inversion).

The introduction of innovative technologies in the design of an ethnic costume made it possible to identify the main directions in the design of clothing, including a stage costume - sensory reflection, neurocommunication, 3D modeling and visualization technologies. On the basis of the study, it was possible to identify a semiotic system of visualization of the character's image, which includes the following components: word, sound, line, spot, color.

The revealed system served as the basis for the introduction of artistic principles in the creation of an ethno costume: simple forms, ornamentation and decoration of an ethno costume, compositional logic of an ethno costume, color solutions of an ethno costume in the innovative trends of ethno costumeology in the context of the modern theatrical process.

The implementation of the theoretical and methodological foundations of the study will make it possible to effectively implement in the practice of the modern theatrical process in Kazakhstan the world experience of innovative trends in ethno-costumology.

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Career Counselling vs Life Coaching – Differences and Similarities

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Abstract: Topicality of the research is that coaching, in general, and life coaching, particular, becomes more and more popular in the market of “helping services”. Coaching includes wide range of technics and sometimes is promoted as a unique pill that can help in solving any type of problems or situations. For some part of the society (professionals and service users) it becomes hard to identify the differences and similarities between life coaching and career counselling – in what cases what type of service might be needed and why. The aim of the study was to identify theoretical and practical differences between career counseling and life coaching. Methodology includes the following steps – theoretical research with different sources available on the topic and a small qualitative research where 4 professionals (two coaches and two career counsellors) were asked to describe their job and to point out their opinion and attitude towards the opposite part. The questions are covering their opinion on the differences and similarities between professions from professionals point and from client perspective, their opinion about education and job possibilities. The results show that at some point professionals from both parts are stereotypic about each other. Theoretical research shows that life coaching is considered to be a wider service for different situations, career counselling is a service for topics containing professional development and employment. Both services use similar methods, but coaching works only with client’s thoughts and ideas without providing them external ideas and guidance.

Keywords: adult education, life coaching, career counselling, personal development.

Introduction

Nowadays different information selling services (especially – online) gain a lot of attention. In Eastern culture coaching itself is promoted as something crucial not only for individual development, but for organizational development as well. In 2009 The Chartered Institute of Personnel and Development (CIPD) research showed that more than 500 companies (that were surveyed) are using coach services to increase performance of their workers and companies itself, for them coaching is a part of learning and development strategy (CIPD, 2009). Twelve years later, after almost two years of global pandemic coaching gained a lot more weight and importance in modern society. What happened during that period of time with career counselling? Are these two things similar or totally different? What does coaching actually mean? The author decided to get clear with this topic and create a theoretical overview of these two phenomena.

In 2020, when pandemic hit the world, and all of us were stocked at home the importance of client-oriented services grew immediately. No matter are we going to offices every day or just opening laptops we are still trying to develop our careers and trying to balance this work-life situation, which became even more complicated when our home is an office, a gym, school and a place for leisure activities at the same time. We need someone to speak about it, someone who can help us not to lose our mind.

In August 2021, while using Google search engine and typing in *career counselling* in 0.64 second we can get 87 700 000 related results which is an insane amount of information no human being can truly understand. Searching *life coaching* in 0.76 second we get 506 000 000 related results which is even more. That simple experiment shows how much more popular life coaching has become. So, it is time to get clear with what life coaching really is.

For rapid world we live in for all of us it is important to stay flexible and be able to move from one job to another in order to stay up to date with market. For those who is not so advanced even career coaching is provided (Ebner, 2021), what is this and how it is connected with coaching itself and career counselling? It is important to understand for potential clients and for professionals.

According to Henry and Karen Kimsey-House, coaching is client-oriented process in order to teach the individual to look for answers, help him to take responsibility for his own decisions and advise him during the whole process. Coaching's main idea is not to help an individual to solve any problems (problem will be solved mostly during process), but to teach an individual to move forward and develop perspective (Kimsey-House et al., 2021).

Career, according to the latest information, is the pattern of work-related experiences that span the course of a person's life (Greenhaus et al., 2019). So, career counselling is a form of professional assistance in order to get that experiences to a certain level.

To be clear, it is important to emphasize that career counselling and life coaching are provided by two different professionals with different education degrees and opportunities, with different target groups and the author of the article is not going to compare one to another in order to find what is better. Both professions exist in modern society and while working in this field it is important to realize where border crossing point between the two fields is and what interesting features, we can borrow from each other.

Each of the professions is important and is needed in different life situation, sometimes in an ideal world a person who struggles with career issues can work with both of the professionals in order to get clear with career issues (with career counsellor – get some advice about education, job etc.) and get motivated, create sustainable and reachable plan in order to achieve goals (not only about career) with coach.

People tend to engage in self and environmental exploration in order to progress in career development (and development in general), people try find some correlation with their personal traits and possible occupation or further life decisions to achieve their goals and feel overall satisfaction in life (Littman-Ovadia, 2008). It is also important how they put goals and where motivation is coming from (Muchinsky, 1983).

It is important not only to have high level of hard skills, but also work on human capital in general, for future development and for individual being employed and able to hold their job and develop. Development activities include not only education, training, skills and abilities, but also having regular supervision or an opinion from a side when it is needed (Dachner et al., 2021).

When a person is looking for any kind of professional like career counsellor, life coach or any other type of counsellor it is extremely important to choose the right one. There are different aspects that are needed to be taken into consideration – previous experience (reviews from other clients), education (not afraid to ask for a diploma, certification), participation in international organizations (that can be a guarantee of high standard service) and a wide portfolio. It is important to understand not only what type of the person stands in front of you, but also what are you expecting from service provided and are your expectations connected with reality?

For a person who's looking for help at some point it might look very similar – both professionals are speaking about development, both will help to set goal, to achieve it. Is it really a matter of name, of price or something else?

Almost for two years the world is coping with COVID 19 pandemic and it has a massive impact on the whole “field of helping professions” – not only all of them moved online, but also a lot of people are struggling with a job loss, identity loss and a need to be flexible. Some of them are looking to get professional help. At that point COVID 19 crisis and the whole situation of turbulence in employment makes it one of the best times for professional to gain new clients and for individuals to experience totally new and unexpected career growth (Huo, 2021).

Nevertheless, the pandemic will end at some point, but a lot of new professionals and individuals who became life coaches and career counsellors will remain in the field. Individual can't become a career counsellor in a short period of time, in order to call yourself one, an individual needs to obtain a degree. It depends on a country, but it is only a master's degree in Latvia and in few places (for October 2021 – 3 masters programmes in Latvia and 3 programmes for teachers to achieve qualification “teacher – career counsellor”) (Nacionālā izglītības..., 2021) Getting evolved into classical form of education gives some understandable structure and procedures that future

professional is going through. Of course, it doesn't mean that getting a degree automatically makes you a good professional, but it gives hope.

According to life coaching, there are many educational opportunities and it is important to choose wisely. The best way possible is to check out International Coaching Federation web page that shows licensed programmes For October 2021 there were 10 schools (organizations) that provide an opportunity to become a life coach (ICF, 2021).

How does it affect professionals? Probably, you can't become a properly trained professional in a few weeks... Does it come with two-year-long education? No guarantees at all. People of different background choose to work in that field. Life coaching is quite a new area, but already in 2007 coaching industry was booming at the time and it was very prestigious to have personal coach (Kessel, 2007). nowadays it is still booming, but in a new way and even more rapidly.

Coaching started in counselling and still uses counselling methods – basic methods of creating trustful relationships, interviewing, curiosity (as method), powerful questions, creating motivation etc. (Skerten et al. 2006). Coaching in general and life coaching as a part of it might be considered as a “little brother” that developed into big, independent personality.

The aim of the article is to describe theoretical and practical differences between career counselling and life coaching in order to gain perspective on these two different helping professions.

Methodology

The research question was what the differences and similarities between life coaching and career counselling are. First, the monographic method has been used to provide this study. Available literature (printed and online versions) about career, career counselling, coaching and life coaching were used. The author used sources in Latvian and English. Previous research in the field related to the theme of article was used.

In addition, in the middle of 2021, qualitative empirical research was carried out – two career counsellors (private practices) and two coaches were asked to answer a few questions about their fields:

1. What is your job's main goal?
2. What do you know about career counselling/life coaching?
3. Do you consider it as partly similar fields?
4. What are the main differences in these two fields?

Answers were recorded on tape and then decoded into text; pieces of the short interview (each around 30 minutes) are shown in the article.

Results and Discussion

To start with discussion, it is important to realize what we understand by the term “life coaching” and “career counselling”. Life coach works with their clients to help them to achieve goals, overcome obstacles, and make changes or shifts in their lives (Richards, 2020). According to Savickas, career counselor can provide “a safe space from which clients can seek growth and exploratory experiences” (Savickas, 2002). It seems quite similar and connected. What is the difference?

Shortened version, might be that life coach doesn't have any specific qualification, but is respectful, tolerant, and ready to cooperate in any sphere, but career counselor focuses on employment, career and job topics. Being involved in career counselling field we know that according to Donald Super career development includes not only education, occupational preferences and competencies, but also includes individual's life situations, all changes that comes with time and experience (Super et al., 1996).

According to Latvia's labor market career counselling has its own place in national job classification system and career counsellor has two places – career counsellor in education (aka teacher career counsellor) and career counsellor that corresponds to human resource field. Coach (that can be related to any type of coach) is called promoter of growth or development (in communication people still use coach in Latvian) (Labklājības ministrija, 2021).

In the empirical part of the research 4 professionals took part – 2 career counsellors (both women – 36 and 42 years old, both have multiple jobs and career counselling is a part of it, both have master's degree in career counselling, both more than 4 years of practice in career counselling). Two life coaches took part in the survey – man (37) and woman (32), the man has International coaching federation certification as ACC (Associate Certified Coach) professional, the woman has started her journey recently and is recently accepted by ICF. The man has more than 6 years of experience and the woman 1 + years of experience.

All of the participants were asked the same questions (3 interviews were held in Latvian and one interview (woman, 32, life coach), were held in Russian. You can see some quotes of the interviews translated by the author in this article

First question. What is your job's main goal? Career counsellor (36) answered following: *“Mostly my clients are pupils in their last grades or youngsters in general, they don't know how to move forward from school to adult world, how to choose profession. So, probably, my job's main goal is to help youngsters realize what they can do in life and where to work”*. The second career's counsellor answer was quite short: *“My job's goal is to help people find and hold the job they want and like even if they are employed at the moment of our cooperation”*.

That sounds really appropriate to the idea of career counselling and emphasizes that career counselling's main topic is employment. Both of the career counsellors were asked to express their attitude towards D. Super's idea that career is not only about employment, but also about the whole life in general and, maybe, career counsellor should work widely with person – not only mentioning employment. Both of the respondents answered quite similar – *“Career counsellor is not a therapist or psychologist. We don't have skills to solve complicated personal problems. We only can advise to find another service if it is needed”*.

Then both were asked *“What they know about life coaching?”*. Career counsellor (36) answered, that knows this field and even tried to get educated in it, but it doesn't seem *“professional”* to her. *“Life coaching is a modern thing now. Everyone is some kind of coach nowadays, but how you can help other people when you are not trained properly? I consider that there might be good specialist in that field, but you should choose very wisely, because education and professional training of any specialist is the key”*. Another career counsellor (42) mentioned that she knows about the field of helping professions but hasn't any experience in that. *“It is a new thing on our market, but I am not sure that people are ready to pay big money for nothing”*.

Both career counsellors considered that there is nothing similar in these two professions except that both are from *“field of helping professions”*. Answering the last question *“What are the differences in these two fields?”* both of the career counsellors answered that these are two different professions and people in them do totally different things.

Life coaches have a quite different view on this topic – answering the first questions *“What is your job's main goal?”* first life coach (man, 37) told that *“the main goal is to help client find answers, but not answer for him. Coaching is about guiding clients to achieve whatever he wants to achieve, to create atmosphere that motivates and help to move forward”*. The second one (woman, 32) defined her job's goal as *“help client realize his potential and use it to the fullest”*.

Both life coaches knew what career counselling is and both mentioned, that it is a sphere of consulting that specialized on certain topic (employment, job searching), but life coaching includes everything that client wants to cover.

According to the third question about similarities in both professions life coach (man, 37) answered that *“of course, there are some similarities, because we both work with client's needs, but, I guess, a coach focuses more on resources and how to activate said client, but career counselling is more specific. It is important to realize that coaching is not counselling in any form”*. Woman (32) answered that there might be few similarities, but she is not so informed about career counselling specific, she considers that anyone who works with people should try coaching methods and competencies in their work, because it might open clients in totally different light.

Answering the last question about differences both life coaches answered that the main idea that people should understand that coaching is not counselling. Coach won't give you advice, won't help you, he will follow your plan of development, will accept everything you want to achieve and will create that atmosphere of motivation and acceptance.

Analysing the results of the interview the author created Table 1 that shows a short summary of the received answers plus represents average price of an hour of work of career counsellor and life coach in Latvia (brief search through information on different professionals' website, for October 2021).

So, what there is in common in both professions? Definitely, both they are from group of "helping" professions, but they consider helping in different way. Life coach insist on theory that clients has all answers already inside and coach should help find the way to the answers, client create goal, plan to achieve goal, but coach has relatively passive role – watching over, motivating, but not controlling and pushing forward – it is always clients need and ability to do or not to do.

Career counselling is more concrete and focused on certain topic related to job searching, creating, holding and all different activities that could be done thought working and being employed. Of course, it consists of preparing as well (getting proper education, additional training etc.) and here career counsellor should be very concrete, but still final decision always will be done by client.

The author consider one of the main differences between career counselling and life coaching that in coaching professional is kind of a supervisor for the client, he is following his path, but is not active in it, he is asking questions in order to help the client find the right insight that will help to bring out the needs, goals and ways how to achieve it.

Life coach can work with client who has some employment related question not being deeply educated in this topic just because life coach is accepting everything client brings out in the sessions and in what area of life he wants to achieve the balance.

Life coaching might be a very useful tool to increase personal insight and to shape and reinforce desired behaviour and actions (Ammentrop et al., 2019).

Table 3

Life coaching vs Career counselling

Indicators	Life coaching	Career counselling
Education	Courses + ICF accreditation	University degree
Main idea – philosophy	Help individual realize his potential and resources and use it to the fullest	Help individual to develop their career related skills and use them in order to develop and improve career path
Average price of an hour (for Latvia)	Starting from 70 EUR per hour (usually, coaches sell pack of session (5, 7, 10 or different))	Around 50 EUR per hour
Similar ideas	Helping individuals (in different way), creating trustful relationships, motivation.	
Different ideas	Covers all different field of life. Doesn't help to solve or give advice, help client to find answers and way himself.	Focuses on employment and job field in general.

There are aspects of life coaching that might be very useful in client-oriented work (like career counselling, teaching, consulting in general).

According to International Coaching Federation coach should be fluent in eleven professional competencies (which includes 48 markers) covering such topics as – working according to ethical codecs, creating coaching agreement with client, creating trust and intimacy, coaching presence, active listening, powerful questioning, direct communication, creating awareness, designing actions, planning and goal setting, and managing progress and accountability (ICF Professional Certified..., 2014).

National Career Development Association (NCDA) has it owns Code of Ethics (2015), which includes different categories that career counsellor should be working by. It covers professional relationships;

relationships with other professionals; confidentiality, privileged communication, and privacy; professional responsibility; providing career services online, technology, and social media and others (NCDA, 2015).

Both of the codes have some similarities, ICF code has wide range of markers and standards how coach should act and how not, it may give big wider perspective for client looking for a professional – what kind of professional he is going to look for. They both include basic things that every client expects – safety, intimacy, respect and acceptance. In rapidly changing world it is basic ethics needs that must be covered (Alsaad, 2021).

According to Kim Richards, certified life coach, “It is an incredible privilege and honour to have the opportunity to support a client in an intimate relationship of digging deep to determine and manifest their life desires” (Richards, 2020). At the end of the day it is the most important thing, what value our service brings into client’s life – it doesn’t matter how we call ourselves, how much we earn and what our background is. The most important thing is that we create save environment, we make client feel worthless, unique and important, a person who can make a change.

Conclusions

In situation when the market is full of different professionals providing their services it is extremely important for potential client to understand what the service means and what they should expect. For professionals it is also important to be aware of different services that are out at the market to make sure their clients get the best one.




- Life coaching and career counselling are two different professions with some similarities and features that both need to use.
- Life coaching started from counselling itself and still uses the methods of counselling.
- Life coaches tended to consider career counselling as a small field. Life coaches consider that career issues can be solved during coach sessions.
- Career counsellors tend to underrate life coaches mentioning that one persona can’t be a supervisor in solving different type of issues.
- There might be an issue in the field of education – it is more than clear how to get career counsellor education and qualification, but for life coach there is no programmes in academic field. All available opportunities for education are different courses, so a potential life coach should be aware of what he is choosing.
- In some cases a client can solve the same issue with career counsellor and with life coach at the same time.
- Career counselling and coaching have similar ethics standards and are supposed to bring high level of service for clients.

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The Gap between Theoretical and Practical Understanding of Gamification

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Abstract: Gamification is a topical issue through the last decade for researchers and practitioners involved in education, marketing, business, and *organizational consulting*. Research has shown that gamification has a special role to play in organizations - it helps to select and develop the best talents, thereby developing the organization as well as it helps to achieve individual and collective goals more successfully. Gamification is also used to improve corporate relationships with customers to ensure their loyalty and involvement. There is a lot of discussion about gamification, but at the same time there is often a lack of a common understanding of this concept. This study aims to investigate how the concept of gamification is understood and explained by an ordinary person, as well as where the gamification experience is gained from. The questionnaire developed by the authors consists of three parts: associations regarding the gamification definition, free form interpretation of the gamification concept, as well as the personal experience of the respondents related to gamification in certain environments such as professional development courses, educational establishments, or work. This mixed-method research includes both qualitative and quantitative data. The questionnaire was sent to the respondents electronically, it was filled in online mode. 436 responses were received. Research shows that the understanding of the gamification concept is very different and contrary to the theorists' assertions – the concept is far from mature at this stage. Gamification is still an untapped resource among the Latvian organisations - therefore it is important to promote this concept within organizational as well as in the educational environment, thus promoting and developing the participants' experience in gamification.

Keywords: gamification, organisation, game-based learning, engagement.

Introduction

Gamification has been a topical item in education, marketing, business and organisational consulting in the past decade (Zakrizevska-Belogrudova et al., 2021). As anticipated by some future strategists, gamification has constantly increasing impact on human lives not only within organisations, but also outside them (Schnell, 2010). The use of gaming experiences has become ubiquitous, multi-platform, and within variety of contexts (Ferro, 2021). Y.K. Chou also specifies that, over the past few years, gamification has reached a social breakpoint and is starting to emerge in every aspect of life from education, work, marketing, upbringing of children, sustainability to even the healthcare sector and scientific testing (Chou, 2019). Nowadays, all generations in the labour market, also in social means, daily encounter elements of gamification. We are already used to participating in various campaigns and basically, we are being gamified: the question of whether we notice it or not (Zalans, 2019). Gamification is developing not only thanks to the proliferation of smart devices, but also as a result of increased awareness of the gamification system as the architectural method of the human behaviour (Mordor Intelligence, 2021). A significant part of the gamification market is retail and marketing; however, gamification has the potential to significantly change the process of recruitment, onboarding, corporate training, and workforce adequacy assessment (Mordor Intelligence, 2021).

Studies of gamification have matured, as evidenced by a shift in their focus: gamification has moved away from fundamental questions as “what?” and “why?” to questions around “how?”, “when?” and “how and when not?” (Rapp et al., 2018). However, research on gamification still faces empirical and theoretical challenges. Very few empirical studies are verifying the impact of contextual factors and individual differences on effectiveness of gamification (Rapp et al., 2018). The previous most important questions in gamification research were incompatibility of theory and practice: on the one hand, the theoretical works were not empirically confirmed; on the other hand, research referred to the theory but did not test it for empirical validity (Rapp et al., 2018). Academic studies of gamification have been slow in improving techniques and methods, through which gamification systems and

services are generated; instead, researchers are investigating what practitioners have implemented and realized: it has led to criticism, that research and practice of gamification does not have a complete picture, and what has been done and revealed so far - is a simple version of what gamification should be (Rapp et al., 2018). Gamification will continue to evolve and meet real needs if practitioners and the general gamification community also evolve in their understanding of its principles and practice (Chou, 2019).

It is difficult to recognize the origins of gamification. Yu-Kai Chou, who is one of the best-known gamification practitioners, points out that, in ancient history, people have tried to make their daily tasks more motivating, more intriguing, and even more fun (Chou, 2019). The term "gamification" reached its critical mass in Google search in 2010, but the history of the concept is older. It was invented in 2002 by British consultant Nick Pelling, it was created as a "deliberately ugly word" designating a specific user interface design application to keep electronic transactions attractive and fast. The author of this term applied it only to technologies and introduced the term of gamification to describe consulting services of company "Conundra" (Bruke, 2014). However, according to Andrzej Marczewski, Nick Pelling was ahead of its time, as the term has been regularly used just in 2010 and it had evolved both - in wording and in meaning (Marczewski, 2018). In 2011, the Oxford Dictionary recognized the term "gamification" as one of the words of the year (Bruke, 2014). Brian Bruke talks about the large-scale activities of the beginning of gamification, noting that one of the early and inspiring ways of gamification is people marking in different places, mentioning an application called Foursquare, introduced in 2009, as an illustrative example (Bruke, 2014).

The simplest and most widely spread definition of gamification is as follows: gamification is the use of game design elements outside the game context (Deterding et al., 2011). Similarly, according to Kapp, gamification is the use of game-based mechanisms, game design and game thinking to involve people, motivate action, promote learning, and solve problems (Kapp, 2012). Gamification is the process of engaging the audience by bringing together the best of loyalty programs, game design and behavioural economics. However, without the involvement of employees and customers, even the best strategies and tactics are doomed to failure (Zichermann et al., 2013). Involvement is a combination of three components: deep emotional connection, high level of active participation, long-term relationship (Paharia, 2013).

The importance of involvement is also emphasized by Brian Bruke, who gives the following definition of gamification: "Gamification is the use of gaming mechanisms and design experience to digitally engage and motivate people for achieving their goals" (Bruke, 2014). Gamification creates entirely new models of involvement, reaching out to new communities of people and motivating them to achieve goals they may not even have known about (Bruke, 2014). The main factor of the gamification success is the involvement of people on an emotional level, motivating them to achieve their goals (Bruke, 2014). Gamification is ability to derive fun and engaging elements, which are typical of games and apply them to the real world or productive activities - this is how gamification is defined by Yu-Kai Chou, one of the most influential gamification experts of today (Chou, 2019). In general, the aim of gamification is to turn something into a game so that the behaviour is changed, in other words - the game becomes more than absolute entertainment (Hayward, 2017). Gamification is sometimes incorrectly applied to all educational games. As Deterding noted earlier in 2011, it is a unique field that differs from serious games, playful designs, playfulness - gamification does not mean turning everything into a game, it is looking for ways to take gamification principles as well as how and why do they motivate. These principles are then applied as a layer of interaction in a non-gaming environment (Chapman et al., 2018). A similar approach is taken by Andrzej Marczewski, who chooses the term "game thinking" to describe the use of games in non-play educational settings, marketing, human resource management and business in general. He defines game thinking as the use of a game and its elements for solving problems and creating a better experience (Marczewski, 2018).

Study on the use of gamification in organisational consulting was conducted in 2020, which showed that gamification is not a frequently used method in Latvia. The theory and the results of the research study led to a conclusion that organisations see substantial benefits in the use of gamification, supports the use of gamification as an effective tool in working with teams or groups. At the same time there is very limited information regarding the theoretical approaches to gamification, the views of various globally renowned experts, or successful game designs. The concept of gamification has not been sufficiently

explained and there is still no common understanding regarding it in Latvia (Zakrizevska-Belogrudova et al., 2021).

Another study in Latvia confirmed that use of gamification elements significantly increases employee engagement in training and also job engagement (Ludviga et al., 2017). Human resources is one of the business areas where gamification has been successfully used in different companies worldwide: processes like recruitment, onboarding, training and development, performance management, reward and recognition, internal communication, team building are most commonly being gamified (Ergle, 2020).

In the meantime, new companies are emerging and offering gamification platforms for organisations and employees, and this suggests that gamification is developing in Latvia (Zakrizevska-Belogrudova et al., 2021).

The aim of the study is to find out how the concept of gamification is understood and explained by an ordinary person, and where the experience of gamification is gained.

Methodology

Four research questions are raised in this work: How does an ordinary person understand the concept of gamification? Are there statistically significant differences in gamification experience among respondents with a different gender, age, or place of residence? Where gamification is most experienced: in professional educational courses, at school or in the work environment? Are there clear differences in understanding of the gamification concept between respondents with and without gamification experience?

Procedure: Primary data have been obtained using a questionnaire developed by the authors of the research study. The survey was conducted online on the Webropol platform, the link of the survey was sent electronically on a convenient sampling basis, as well as posted on the social media profiles of the authors. The study lasted for a period of May - September 2021.

Materials or Measures: Mixed-type study was performed and SPSS software and word-cloud generator was used for data processing. To analyse the differences between several groups of respondents, the Pearson Chi-Square test was used. The content analysis has been used for qualitative data analysis, including the word cloud.

Participants: 436 respondents participated, and their demographic data are shown in Table 1. Most respondents are women (81.8%), predominant in the age group from 26 to 40 (58%), most often the place of residence is Riga and most of the respondents have higher education.

Table 1

Demographic data of the survey respondents

Gender		Age (years)			
female	male	up to 25	26 - 40	41-55	56 and older
357	78	23	253	142	18
81.8%	17.9%	5.3%	58.0%	32.6%	4.1%
Place of residence					
Riga	Kurzeme	Zemgale	Vidzeme	Latgale	outside Latvia
207	30	43	131	9	16
45.5%	6.9%	9.8%	30.0%	2.1%	3.7%

In addition to the demographic data shown in Table 1, respondents answered the question about the level of education: 5 or 1.1% of respondents have acquired basic, 77 or 17.7% secondary and 354 or 81.2% higher education.

Results and Discussion

Having or not having experience with gamification appeared to be non-related to any of the demographic variables. Since both variables are nominal, Pearson Chi-Square tests were performed, and the following values were obtained (Table 2).

Table 2

Chi-Square Tests results (all respondents, n=436)

	Pearson Chi-Square Value	Degrees of freedom	Asymp. Sig. (2-sided)
Gender	2.61	2	0.27
Age group	5.56	3	0.14
Place of residence	6.35	5	0.27
Level of education	2.39	2	0.30

Since all Sig values are above 0.05, this allows to conclude that the experience related to gamification is not related to gender, age, place of residence or education of the respondents. Out of those who had experienced gamification (n=164), 73 (or 45.5%) had this experience in professional educational courses; 62 (or 37.8%) at work; and 30 (18.3%) at school. Fifty-five respondents (33.5%) stated that they have no experience, but they have heard about gamification

As the results of the Chi-Square test show, respondents who have experienced gamification at work, no statistically significant differences were found among respondents, based on differences of gender, age, place of residence and education level.

Table 3

Chi-Square Tests results (n=62)

	Pearson Chi-Square Value	Degrees of freedom	Asymp.- Sig. (2-sided)
Gender	0.17	2	0.92
Age group	4.59	3	0.21
Place of residence	5.18	5	0.39
Level of education	2.99	2	0.22

A total of 1308 words were collected on the request to indicate association with the concept of gamification. The most frequently mentioned associations: play (173), passion (47), entertainment (35), and fun (28).

What are the differences in perception of gamification between those who have experienced it and those who have not? Summarizing the answers given by respondents without gamification experience to the question about associations with gamification, many of the respondents had stated that they do not know and have no idea or understanding of the concept. However, some shared their associations and the most common ones are as follows: games, gambling, fun, addiction, entertainment, computer games, board games (see Figure 1).

Below the word cloud are also the most typical statements, mentioned by respondents as the associations. It is obvious that, for the majority, these associations are different from how gamification is being defined. Gamification is especially often associated with everyday gaming on smart devices and leisure with family and friends (Figure 1).

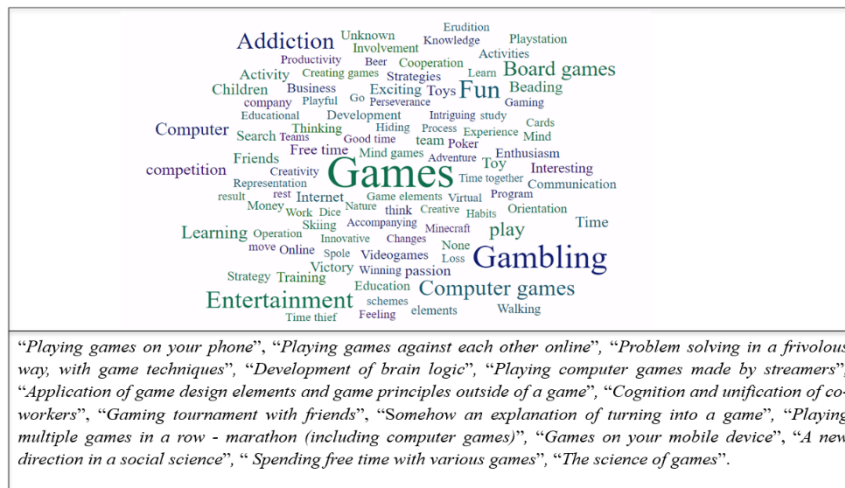


Figure 1. Word cloud and sample statements (respondents with no experience in gamification, n=272)

For respondents who have gamification experience in the work environment, the picture appears to be different. The following words predominate in the associations - interesting, fun, entertainment, game, involvement, learning, creativity, competition, challenge (see Figure 2).

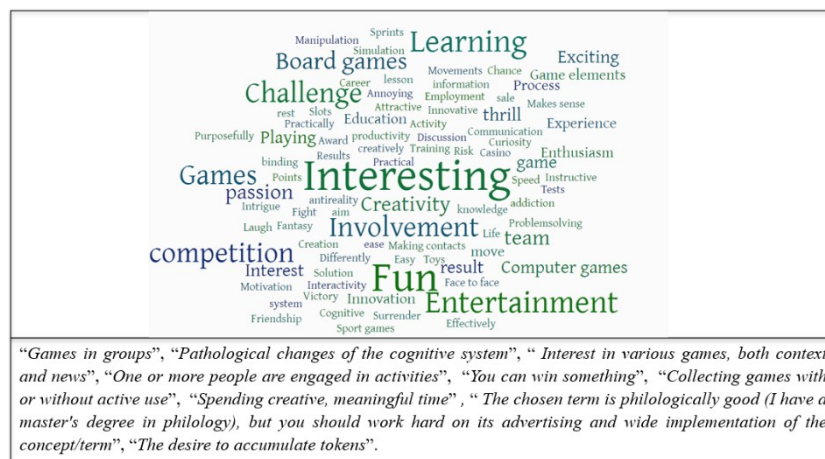


Figure 2. Word cloud and sample statements (respondents with experience in gamification at work, n=62)

The associations of this group of respondents, mentioned in the form of statements, are also summarized and shown below the word cloud (Figure 2). They show that, in general, the understanding of the gamification concept also differs in this group and not always in accordance with the most recognized definitions.

The data obtained on survey question - interpretation of the gamification concept in a free form – were analysed using content analysis. To do this, three broad groups of responses have been selected according to experience: group 1 (g1) – those who have not experienced gamification at all; group 2 (g2) - experienced in professional educational courses; group 3 (g3) - experienced gamification at work. The authors have divided these explanations of the gamification concept into the following categories:

Playing (meaning - carefree, with fun and without purpose). Although this category includes quotes from all the groups of respondents defined above, a large majority are survey participants of group 1, or those who have indicated that they have not experienced gamification at all. The brightest quotes in this category:

“Games played with children” (g1), “Spending free time with friends or family” (g1 “Something similar to photo orientation activities” (g1), “A large number of people get together (usually friends) and play board games” (g1), “An unfinished gaming process, which can be continued at a place and time convenient to oneself, can only take place in outdoor” (g1).

Computer games / games on the Internet. There are also mostly quotes from respondents of group 1, in other groups this section does not appear at all.

“Playing various computer games” (g1), “Playing several computer games in a row, such as a game marathon” (g1), “Using video games for leisure time spending” (g1). “Addiction to computer games!” (g1). Indeed, development of gamification is mainly based on technological progress. However, gamification is not just about digital technology. Andrzej Marczewski is also supporting this idea by writing into his gamification site, that Brian Bruke has announced the need for changing the Gartner’s gamification definition, which now has been applied just to digital environment. Marczewski points to the illogical nature of such a change (Marczewski, 2014). Emmanuelle Savignac, referring to the Gamification World Congress of 2011, also notes that this issue has been widely discussed. Majority of Conference speakers have expressed an opinion, that opportunities of gamification are not limited solely by digital solutions (Dymek et al., 2016). Digital games are far behind so-called board games, because the greatest contribution in the participants’ learning and development process is created specifically through the physical presence, communication and cooperation between participants of the game (Lejiete, 2016).

The use of game or its elements for an additional purpose. Only a small number of respondents explained gamification close to its established definitions, see below. Responses in this category mainly come from group 2 and group 3.

“Transforming content into a game format to increase attention of audience” (g1), “Achieving a result or goal, using the elements and relationships of the game” (g1), “Acquisition of skills using game elements” (g2), “Use of game elements to motivate non-game activities” (g3), “Doing serious things with elements of the game / play, thus lowering barriers of starting or continuing something” (g2), “The use of game elements in work teams to promote healthy competition, to develop personal growth, awareness of one’s abilities, development of creativity and diversification of daily activities” (g2), “The use of game elements in training or in the management of the enterprise, or in any other process” (g3), “A method of training, development, problem-solving through the game elements, to increase involvement, enthusiasm and encourage thinking outside the ordinary and the standardized” (g2), “The use of methodically and appropriately selected game elements in learning or any other process, focused on human interaction and collaboration” (g3), “Incorporating the different game elements into learning / working processes. This is a way to increase people’s motivation to work / learn by using the game type elements and incorporating them into school or business. Gamification elements are a great for non-formal education; great approach which can be used to motivate and interest people. It is increasingly being used and gaining popularity in companies” (g3), “Applying the game elements to get people more involved. For example, on-the-job training developed with elements of games may seem more interesting, it is easier to remember what has been learned” (g3), “Use of game elements in common life and work situations” (g3).

In this category many explanations apply to the work environment. Indeed, gamification has huge potential for use in human resource management. For example, Ergle and Ludviga found that teambuilding and internal communication are organisational internal processes which very well respond to gamification (Ergle et al., 2018). In the same time managers must be careful about the blind use or broad implementation of gamified technologies: even if they appear trendy to be effective, they must fit with the companies’ overall culture and strategy (Hammedi et al., 2021).

It should be pointed out that a large number of respondents answered that they cannot provide an explanation because they really do not know what gamification is.

Conclusions

This study aimed to is to find out how the concept of gamification is understood and explained by an ordinary person in Latvia, and where the experience of gamification is gained. Although, in scientific publications and studies of recent years, the gamification is considered as a mature and developed concept, this research shows that in Latvia the situation is different. In practice, the average person does not understand or only partially understands the concept of gamification. More than half of the respondents who filled in the survey note that they have no gamification experience. However, those respondents who have experience, mostly experienced it through professional development courses,

including the workplace. Few - in educational institutions. Associations are also different: respondents who have not experienced gamification, mostly associate it with video and computer games, gambling and playing; however, respondents with experience in gamification, indicate associations such as learning through games, interesting, fun, entertainment, involvement, learning, creativity, competition, challenge. Only a small number of respondents explain gamification close to its established definition.

This study has certain limitations leading to avenues of future research, in order to collect more responses, the survey was intentionally designed as very short. Therefore data on organisations and industries represented by the respondents were not included. Future research could identify in which industries and which type of organisations use gamification more. Moreover, the impact of gamification activities of the organisational outcomes is another area of future research.

However, the finding reported here could spur future research and practical application of gamification in Latvia. Gamification is still untapped resource among the Latvian organisations and educational institutions - therefore it is important to promote this concept within business, organisational as well as in the educational environment.

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Healthy Diet and Regular Physical Activities for Support Endurance and Fitness

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Abstract: Balanced diet and regular physical activities are essential for support health status, physical fitness and endurance, and decrease the risk of health disorders and morbidity. Balanced diet that cover physiological requirements and needs is a very important for support physical fitness and improve the quality of recovering processes after physical load. Knowledge and skills of individuals allow making good and right choice of daily essential nutrients and keeping optimal health status and improve physical endurance. The aim of the study to analyse cadets' daily dietary habits and knowledge in nutritional education on the base of questionnaire and elaborate adapted to respondents. Cadets' daily dietary habits and knowledge in nutritional education analysed on the base of questionnaire that elaborated and adapted to respondents of study group. The study group included 73 persons of both gender (male N= 65, and female N= 7) in aged from 20 years until 35 years. Questionnaire included 22 questions about daily dietary habits, menu planning, nutrients levels, food products consumption, and composition. Only 30.5 % of respondents interested into eating adapted dietary patterns and follow to dietary recommendations. Supervision of dietary habits, water consumption, dietary patterns are essential for health capacity support done by 73.6% of respondents. Quality and quantity characteristics of dietary patterns are essential for support physical and mental activity. Balanced and moderate diet is essential for improving working capacities, diminished fatigue, improve concentration capacities and support mental activity as a result provide wellbeing and welfare of individuals.

Keywords: balanced diet, dietary education, dietary habits.

Introduction

Balanced diet and regular physical activities are essential for support health status, physical fitness and endurance, and decrease the risk of health disorders and morbidity (de Ridder et al., 2017, Vašek et al., 2019). Active physical training during study period in National Defence academy pointed topicality of nutritional adequacy that is a personal responsibility of cadets. Balanced diet that cover physiological requirements and needs is a very important for support physical fitness and improve the quality of recovering processes after daily physical load. Knowledge and skills of individuals allow making good and right choice of daily essential nutrients and keeping optimal health status and improve physical endurance (Yu et al, 2018; Lutz et al., 2019; Cole et al., 2021; Wardle et al., 2021). Military personnel in daily service have full self-responsibility for self-nutrition education and healthful diet promoting: take meal in right time, in adequate energy quantity and balanced nutrients' patterns (Pograjc et al., 2010; Teo et al., 2017; Schlinkert et al., 2020). The energy allowance of diet designed to maintain healthy level of body mass and readiness to fulfil moderate physical activity level's tasks. Energy consumption depended on mode of physical load, its intensity and duration, individual body size. Recommended daily nutrients intake level variate among individuals and depended upon age, anthropometric parameters' (body mass, height etc.) and levels of physical activity (Lim, 2018). Nutrients composition for moderately active individual in aged above 18 years prescribed by nutritional allowances and standards (WHO, 2015). Adequate adult dietary intake included main nutrients patterns proteins, fat and carbohydrates. Proteins composed 20% of daily dietary energy requirements in kcal volume or 0.8 g per 1 one kg of body mass. Deficiency of proteins lead to limited physical fitness and working capacity as well cognitive and mental functions. Fat provides energy for cell and tissue activities and metabolic processes. Fat has vital importance for support vitamins absorption and mineral substances balance; maintain working capacity, cognitive functions (Farina et al., 2020). Fat dietary patterns optimized cardiovascular, digestive, locomotor system activities as well mental function Kullen et al., 2016; LaFountain et al., 2019, Dyal et al., 2022). Fat composed 20 - 30 % of the daily dietary energy requirements in kcal for physical active individuals (Teo et al, 2017). Carbohydrates used as energy resource and composed 50-60 % of daily dietary energy volume in kcal. Carbohydrates transformed in energy of body processes and used for reserve formation in liver and in

muscles (Zariņš et al, 2018). The balanced and healthy diet with combined carbohydrates allows to keep high-level of concentration and mental activity (Lutz, 2019). Healthy diet included complex of micronutrients that covered physiological requirements of nearly healthy active military person (calcium, phosphorus, iron, ascorbic acid, iodine, fluoride, sodium etc.). Balanced and moderate diet is essential for improving working capacities, diminished fatigue, improve concentration capacities and support mental activity as a result provide wellbeing and welfare of individuals (O'Leary et al., 2021; Carlson et al, 2013). Balanced diet gives energy resources for daily activities and provide optimal level of working capacities and adaptation to various external factors. Planned balanced diet before physical load exercises allow to increase physical fitness through impact on glycogen level in muscle tissues. Adaptation of diet after physical exercises is necessary for restoring glycogen reserves and improve renewal processes in body. NATO Standard AMedP-1.11 (NATO Standard..., 2013) and RTO Technical Report (Nutrition Science and..., 2010) proposed special nutrition standards for military operation. Therefore the diet that adapted for military personnel according NATO recommendations should include proteins 15-20 % of dietary energy volume or 1,2-1,4 g per kg of body mass, carbohydrate 50-60 % of daily dietary energy volume in kcal, and fat 25-30 % of dietary energy volume. The purpose of the study was to analyse cadets' daily dietary habits and knowledge in nutritional education on the base of questionnaire and elaborate adapted for respondents' recommendation for improving knowledge and skills of individuals that allow making good and right choice of daily essential nutrients and keeping optimal health status and improving physical endurance.

Methodology

The research question was: What dietary support do cadets need? The cadets' daily dietary habits and knowledge in nutritional education analysed on the base of questionnaire that elaborated and adapted to respondents of study group. The study was conducted in 2021. The study group included 73 persons of both gender (male N= 65, and female N= 7) in aged from 20 years until 35 years. Respondents in age group from 20 until 24 years composed 60,0 %, 26,1% of respondents were in aged from 25 until 29 years, and 13,8% of respondents were in aged from 30 until 35 years. Respondents had experience in military service from 24 months until 60 months. Questionnaire included 22 questions about daily dietary habits, menu planning, nutrients levels, food products consumption, and composition.

Results and Discussion

Daily dietary habits depended on level professional physical activities as well individual anthropometric characteristics. Assessment of anthropometric parameters - height in male respondents' group revealed that 58.5 % of respondents had body height parameters in the interval from 181cm until 190 cm. The body mass parameters' variations of respondents were wider, for 49 % of respondent body mass were found in interval from 80 kg until 95 kg. Respondents with body mass parameters from 65 until 80 kg composed 36.9% of research group. The body mass parameters above 96 kg until 116 kg fixed for 13.8% of respondents.

The female respondent group include seven individuals. The six female respondents were in aged from 21 year until 23 year and the one female respondent was 31 year old. The body height for six female respondents varied from 167 cm until 173 cm, and the one female respondent was 162 cm tall. The parameters of body mass for female –respondents were in the interval from 60 kg until 66 kg, and one female respondent has body mass 52 kg.

Assessment of questionnaire data shown that the largest part of respondents (75%) had meal three times in day, 52.8% of respondents choose and prepared products for mealtime themselves, but the rest part of respondents (47.2%) used public dietary facilities.

Knowledge of nutritional needs and importance of dietary allowance for support health status and fitness capability allowed maintaining individual daily essential nutrients intake, adapted dietary habits to special climate (environment temperature) and level of physical load. Questionnaire data revealed that 66.7% of respondents coordinated their daily eating habits to the level of physical activity and load as well to activities in special environment, but the rest part of respondents (33.3%) did not pay attention to external factors and did not adapted daily eating habits to the level of physical load. Correct and adapted dietary support of body physiological requirements and menu planning maintain

the physical fitness and physical working capacities. Physical fitness level evaluated annually during physical test exercises that is compulsory part of military training process. Results of physical tests (in scale of ten balls) allowed to classified respondents into groups that reflected physical fitness. The tests with excellent and distinction results passed 72.2 % of respondents. The good and very good results in sports tests shown 16.6% of respondents, and 11.1 % of respondents get results with satisfactory evaluation. The largest part of respondents has opinion (knowledge, self-experience, information resources) that healthy diet was essential support for physical fitness. The 63 % of respondents of study group added in daily meal dietary supplements. The vitamins used as additional dietary supplement by 33,7% of respondents of study group, the extra-proteins also were frequently used as dietary supplement by 20,9% of respondents of study group. The energetics, creatinine – contained substances used as dietary supplement (Figure 1) in daily dietary intake, but 27.9 % of respondents did not use any dietary supplements.

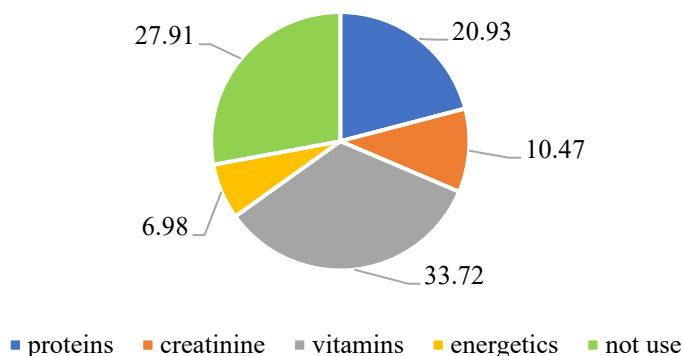


Figure1. Variants of dietary supplements in meal (in %) in daily dietary intake

Diet quality and nutrition status are important for optimal health and military performance. Weight control procedure as well body composition maintenance is the first step is individual responsibility of respondents to control and follow dietary recommendation Assessment and control of body mass parameters provided 65.3 % of respondents.

Questionnaire given possibility to analyse daily dietary intake of nutrient pattern proteins, carbohydrates and fat (in %), selected vitamins and minerals (Figure 2).

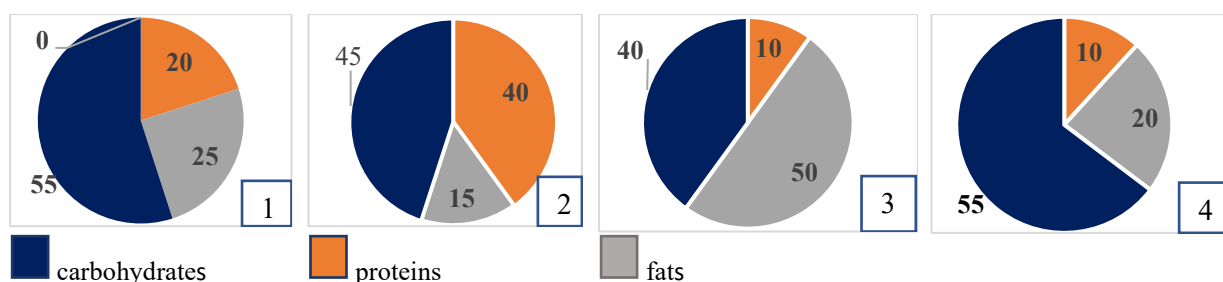


Figure 2. Variants of nutrient pattern (in %) in daily dietary intake

Balanced and adapted diet covered energy requirement of body physiological / biochemical processes in specific physical activity level with definite physical load level. Nutrient standards included patterns in following proportions: fat (25%), proteins (20%), and carbohydrates (55%). According results of questionnaire (Figure 3) only 30.1% of respondents follow to dietary recommendations that guaranty keeping health capacity, welfare and physical working capacities.

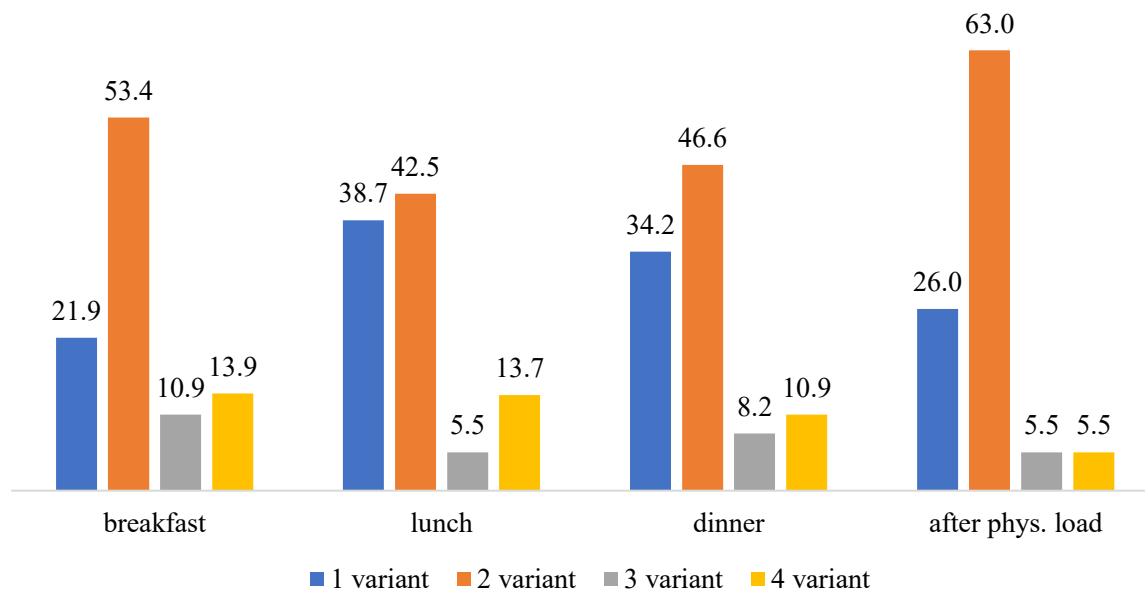


Figure 3. Daily dietary intake variants by respondents (in %) in mealtimes

Balanced and adequate nutrition enhanced tactical performance of military personnel. According NATO recommendation dietary intake for military personnel involved in field exercises in cold environment should contained 4700 kcal for male and 4100 kcal for female, that distributed between proteins (17%), carbohydrates (58%) and fat (25%), that optimized performance and support mission readiness. Dietary intake for military personnel during field exercises in warm environment should consumed meal with declined energetic volume 4000 kcal for male and 3400kcal for female in compassion to the dietary intake in kcal in cold environment. Dietary intake during training military base should contained 3800 kcal for male and 3200 kcal for female, but meal energetic volume capacity should correspond to 2800 kcal for male and 2400mcal for female during regular studies in military base. Nutrients might help **optimize** cognitive and physical performance for the military personnel. A well-planned diet provided enough protein to promote muscle repairing after intensive physical load. The carbohydrates provided about 70-80 % of energy consumption during intensive physical load. Each person has responsibility to control pre-event meal and post -event meal quantity and quality that is an important part of preparation to exercise` physical load level. Amount of carbohydrates in diet should increase during one week advance the physical load, as well carbohydrates used in post- exercise period for restoring reserves. Carbohydrates should take directly after exercise that restored glycogen capacity. The fat used as energy resources during light and moderate physical load, as well they served as energy providers during long-term moderate physical load and given 25% -30% of total energy volume. Questionnaire results allow to characterized quality of the daily meal. Fruit and berries were resources of minerals and vitamins, 52.8% of respondents consumed them daily. Vegetables maintained **good hydration**, provided **vitamin** and **antioxidant** content and are **source of minerals**. **37.5% of respondents used vegetables daily**. **Fish is a good protein source** as well added value of omega-3 fatty acids, that have a positive impact on health and performance, 29,2% of respondents used fish daily. Water drinking helps to show tactical performance and prevent dehydration. Drinking water before, during and after exercise is very important. 84.7% of respondents used water. Milk products is a good resource for calcium content, and also high in protein and a great source of electrolytes for rehydration.26,4% of respondents used milk products daily.

Individual responsibility and authority are the nutritional education, getting knowledge about balanced diet, to accept, to follow and to adapt dietary intake to specific environment and physical activity level. About 63 % of respondents took in account dietary recommendations with high protein composition, the diet with 40% of proteins, 15% of fat, and 45% of carbohydrates. Such diet is not balanced diet, but it given support for renewal processes after strength training exercises. There were also 5.5 % of respondents that used diet with high fat composition, and 5.5 % of respondents that daily

use diet with high carbohydrates composition. Such choice did not given complete support for keeping health status and physical working capacities in long-term period. Questionnaire data indicated importance of interference to improve information packet, knowledge and practical skill in dietary support of physical working capacities of respondents.

Conclusions

Balanced and adapted to physical load diet should be daily responsibility of respondents, the next military officer, whose daily activities connected with high physical load exercises. The military studies and training process give physical and mental challenge for individual. The individual responsibility is following to recommendation concerning balanced diet that adapted to physical load. Only 30.5 % of respondents interested into eating adapted dietary patterns and follow to dietary recommendations. Quality and quantity characteristics of dietary patterns are essential for support physical and mental activity. Assessment of questionnaire results indicated necessity to pay attention to dietary support of health status, physical working capacities by increasing individual authority role, improvement knowledge, giving information packet, organizing lectures and discussions during training process about dietary recommendations and solution of dietary problems in military environments. The study identified components for improving diet quality and deficits. Weight control procedure as well body composition maintenance is the first step is individual responsibility of respondents to control and follow dietary recommendation and 65.3% of respondents provided it. Supervision of dietary habits, water consumption, dietary patterns are essential for health capacity support done 73.6 % of respondents as indicated in questionnaire results. Control of physical fitness level and the sports tests results is the next step in following and support dietary recommendation. Sports tests shown that 72.2 % of respondents have excellent and results with distinction and correction of dietary habit with physical load indicated 66.7% of respondents. Long – term effect of dietary support of physical fitness level in addition to other components of training process is important and essential.

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Benefits of Vocational Teachers' Participation in Projects under Erasmus+ Programme: The Case of Lithuania

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Abstract: Embracing the financing opportunities offered by the European Union, vocational schools draw up applications for various projects, mostly for implementation of international partnerships, dissemination of best practices, and exchange programmes, involving the general education and vocational teachers as well as students, student assistance specialists, and school principals. Vocational training institutions generally engage in projects under the Erasmus+ strategic partnership programme aimed at long-term mobility of vocational teachers and other participants of vocational training. When assessing the importance of Erasmus+ projects in the context of vocational training quality in Lithuania, the authors of the paper aimed at identifying the benefits of vocational teachers' participations in projects under the Erasmus+ programme. Seeking for the research objective, a qualitative research approach was selected applying the triangulation principle. Document analysis method was invoked to examine the project activities documents of 26 Lithuanian vocational training institutions. Benefits experienced by vocational teachers experienced in project activities were analysed applying a semi-structured interview for the interviewing of 9 vocational teachers and vocational teachers who served as international project coordinators in more than two national and international projects in 2015–2019. The study revealed that in Lithuania, projects implemented in vocational training institutions having the largest experience of international project activities were associated with vocational teachers' qualification improvement, introduction of innovations, and renovation and expansion of infrastructure. Benefits of involvement in project activities are diverse, starting with improvement of the learning process, relationships with the learners, and vocational teachers become open to changes. The major benefit of project activities gained by vocational teachers is oriented to experiential learning, when learning occurs through personal experience.

Keywords: vocational teachers, project activities, benefits, Erasmus+

Introduction

As Lithuania takes part in the activities of the European Union (EU) investment strategy Europe 2020, one of the thematic objectives of the Operational Programme for the EU Structural Funds Investments for 2014–2020 involves investments in education, capacities, and lifelong learning. The European Social Fund supports projects that deal with social problems and finance education and vocational training, expansion of employment opportunities, research and development, and improvement of education and vocational training systems.

Embracing the financing opportunities offered by EU, vocational schools regularly submit applications for the implementation of various projects. The majority of those are international partnership, best practice dissemination and exchange projects and programmes involving students, student assistance specialists, school principals, and general education and vocational teachers. The international cooperation between stakeholders in education is promoted under Erasmus+ program and supporting projects financially, but “it is more challenging in vocational education and training than it is in higher” education (Kaleja et al., 2017, 74). Despite challenges, the participation of vocational education and training stakeholders in Erasmus+ mobility projects are growing every year.

The Lithuania's Strategy for Internationalisation Development of Vocational Training and Adult Education (Lietuvos profesinio mokymo..., 2019) notes that learning mobility under the Erasmus+ programme takes place under actions KA102 and KA116. The first part of the programme is intended for vocational schools that are not holders of the Mobility Charter, the second – for those which are. The Mobility charter provides to vocational schools a higher added value when searching for international partners and the opportunity to provide applications in accordance with simplified

procedure under the common invitations of Erasmus+ as well as intensify the mobility of teaching institutions. Thus, students of vocational schools, general education and vocational teachers, administrative staff, and other specialists can make use of the opportunities to participate in mobility projects more often.

Erasmus+ activities promote long-term mobility of students and graduates of vocational training institutions through long-term traineeships in companies abroad or institutions of the vocational training services providers. Activities of Key Action 1 (KA1) of Erasmus+ enable not only students and vocational teachers of vocational training institutions to study at an institution of a vocational training services provider abroad, but also extend this opportunity to company employees, thus involving business partners in the vocational training process. The programme of Key Action 2 (KA2) of Erasmus+ enables the development of international partnerships between vocational training institutions in creating new products or distributing the already existing ones that help improving the teaching process and furthering the quality of vocational training and innovations (Lithuania's Strategy for..., 2019).

Vocational training institutions generally implement the strategic partnership programme projects under Erasmus+. Participation in these programmes and projects enables studying, learning and gaining experience abroad. The best practices from previous international mobility projects in vocational education were named as "ICT, communication, interpersonal, foreign language and work-related skills" to be included in vocational teaching (Egetenmeyer et al., 2011, 27). In the course of the project implementation, competence of learning to learn is promoted as well as transformation of the personal attitude to professional activities that is very important when seeking for the integrity of cognitive and metacognitive development dimensions (Linkaitytė et al., 2009). In particular, personal qualities, motivation, innovative approach to one's activities, and eagerness to constantly improve while taking over the best experience of teaching from foreign countries and modern educational technologies of the subjects one teachers of the educators are emphasised (Daukilas et al., 2016). The professional development of teachers is emphasised in early and recent studies (Hamza, 2010; Egetenmeyer et al., 2011; Günbayi et al., 2016; Tran, 2017; de Paor, 2018; Salcedo-López et al., 2021) in the context of internationalisation and mobility. Analysis showed that teachers are more inclined to adopt new practices or methodologies in the class when they are experiencing benefits by themselves (de Paor, 2018; Salcedo-López et al., 2021). *When assessing the importance of Erasmus+ strategic partnership programme projects in the context of vocational training quality in Lithuania, the authors of the paper sought to identify the benefits of vocational teachers' participation in projects under the Erasmus+ programme.*

Methodology

The research question was defined: what are the benefits for vocational teachers participating in projects under Erasmus + programme? Seeking to attain the research objective, a qualitative research approach was selected applying a triangulation principle. The research was divided into two subsequent stages. In the first stage, analysis of project activities carried out in Lithuanian vocational training institutions in 2015–2019 was conducted invoking a document analysis method. Documents (annual reports of principals, strategic plans, summarised reports of project leaders received by email) of 26 vocational training institutions were examined based on the following criteria: number of vocational training institutions which participated in the project activities, project types, and participants of the project activities and their numbers.

In the second stage, a semi-structured questionnaire was selected seeking to envisage the benefits experienced by vocational teachers who take part in project activities. The sequence of questions established in the interview plan is linked with the benefits of the project activities for the vocational teacher as an individual and for his/her practical activities.

Instruments and procedures of qualitative research. Conversation that best allows for disclosure of individual experiences (Mayring, 2000) was applied in the qualitative research identifying the benefits of vocational teachers' participation in Erasmus+ programme projects and *interview method* was selected enabling to come closer to the individual perception, meanings of a phenomenon and construction of reality (Silverman, 2003a, 2003b). Research participants were surveyed using a semi-

structured interview face-to-face, i.e. in the course of the conversation, they were asked open-ended questions.

Selection of the research sample and justification. When organising qualitative research, the research sample representativeness (Silverman, 2003a, 2003b) was taken into account. The sample of interviewees was compiled based on the research objective and criteria of the participants, i.e., target or criterion-based selection was applied to select certain individuals deliberately, seeking to obtain important information that could not be otherwise acquired (Kvale, 1996).

When compiling the research sample, the aim was to:

- cover a maximum territory, i.e., the largest vocational training institutions operating in the regions of the country (regions of Vilnius, Kaunas, Klaipėda, Šiauliai, Alytus, Panevėžys, Utena, Marijampolė, Tauragė, and Telšiai);
- expediently select the research subjects who are able to provide sufficient information about the issue under consideration.

The qualitative research sample is comprised of the observation subjects who are sufficiently informative in respect of the research and represent the population responsible for the specific activity relevant to the research (Silverman, 2003a, 2003b). In the current research, the target group comprised 9 vocational teachers and vocational teachers who have worked as international project coordinators and participated in more than two national and international projects in 2015–2019 of the vocational training centres with the largest experience in project activities (Alytus Vocational Training Centre (VTC), Public Institution Panevėžys VTC, Kaunas Karalius Mindaugas VTC) and those with less experience in project activities (Vilnius VTC, Tauragė VTC, Šiauliai VTC). The research was conducted in September–October 2020.

When processing the data, each respondent was given a code including the target group [T], case number, and transcribed text page number containing the sample of notional context, i.e. statement.

Data analysis methods used in qualitative research. To process the qualitative research data, a *qualitative content analysis method* was applied. According to Kvale (1996), when applying this method, data is analysed by dividing the text into categories and subcategories or separate themes and subthemes. The latter method allowed for distinguishing notional units in the contents of the text being examined, calculating the frequency of their use, and determining the interrelation of individual content elements as well as their relation with the context of the whole contents.

Results and discussion

Participation of Lithuanian vocational training institutions in international projects. Data analysis revealed that Lithuanian vocational training institutions mostly implemented projects under Erasmus+ followed by NordPlus and Interreg Europe as well as national projects of different areas. Popularity of the Erasmus+ programme in project activities of Lithuanian vocational training institutions is related to the need for internationalisation development including intercultural education and development of professional competences in international environment.

When analysing the results of the project activities of 26 Lithuanian vocational training / education centres, it can be seen that schools engage in long-term project activities and substantially more international projects are pursued than national ones (Repečkienė et al., 2020).

Several Lithuanian vocational training institutions – Kaunas Karalius Mindaugas VTC, Panevėžys Margarita Rimkevičaitė VTC, Utena Regional VTC – have prepared their internationalisation strategies enabling the mobility of project participants from vocational training institutions and fulfilment of the requirements posed to vocation schools in the 21st century. For the initiative in organising employee mobility and proactive international project activities, several vocational training institutions (Kaunas Karalius Mindaugas VTC, Vilnius VTC of Service and Business Employees) have been awarded internationalisation (mobility) charters by the Education Exchanges Support Foundation.

Lithuanian vocational training institutions generally implement the vocational training mobility projects under key action 1 of Erasmus+: “International experience - assurance of vocational training

quality” (No 2019-1-LT01-KA116-060163) and “International mobility for professional improvement” (No 2018-1-LT01-KA116-046638). Projects intended for the creation, renovation and expansion of school infrastructure could be identified as a separate type of projects implemented in vocational training institutions. For instance, project “Development of vocational training infrastructure” (No 09.1.2.-CPVA-K-722) has been implemented in numerous Lithuanian vocational training institutions. The implementation of this measure was aimed at ensuring high quality of vocational training for youth and adults and its accessibility through investments in infrastructure.

Analysis of project activities of Lithuanian vocational training institutions revealed that in 2015–2019, each of them implemented more than two international projects aimed at developing the general and professional competencies of vocational teachers and students, dissemination of best practices, internationalisation development, promotion of teacher and student mobility and enhancing the vocational training prestige, and at least two national projects carried out throughout the country without involving foreign partners.

When examining the project activities of 10 Lithuanian vocational training institutions in the period of 2015–2019, it can be seen that each institution has implemented at least 10 international projects. The smallest number of national projects – two projects in five years. In one year, each vocational training institution implements at least 1 and as many as 13 international projects. It is noteworthy that the majority of projects extend over a number of years and that is the reason why, for example, projects commenced in 2015 could have been completed in 2019.

In the period of 2015–2019, three vocational training institutions were leaders by the number of international projects continued and implemented: Alytus VTC (53 international projects), Panevėžys VTC (40 international projects), Kaunas VTC (35 international projects). It was noted that numbers of international projects pursued by Panevėžys VTC and Marijampolė VTC were increasing, seeing that schools were involved as partners in implementation of projects initiated by other institutions. Other vocational training institutions (Šiauliai VTC, Marijampolė VTC, Utena Regional VTC) implemented less international projects per year, however more students and teachers have been involved in their activities.

During the period in question, each year, on average 52.44% of vocational teachers from all ten vocational training institutions participated in projects. Vocational teachers of Alytus VTC were involved in international projects the most, representing 58.37% of all vocational teachers employed by the centre. An annual increase of vocational teachers getting involved in project activities was observed. As an example, Marijampolė VTC could be mentioned where the number of vocational teachers participating in projects grew almost 10 times by 2019; the share of students involved in project activities increased too. Similar dynamics of project participants was observed in vocational training centres of Tauragė and Panevėžys.

While carrying out project activities, vocational teachers build international relations and their learning through cooperation is promoted as well as formation of values and attitudes and perception of cultural diversity. It can be stated that project activities in these training institutions are among the most popular teaching/learning methods that help disclose the vocational teachers’ professional and intercultural competences.

Experience of vocational teachers while participating in project activities. Experience of project activities is a very important component when assessing professional competences of teachers that helps evaluate the benefits of participation in project activities. Recent study by Tacconi et al. (2021) indicated that participation in the national and international projects (as their work tasks) among Lithuanian vocational teachers are still least frequent. Nevertheless, teachers value participation in project activities as self-expression in their professional work.

In the present research informants’ responses distributed inconsistently, e.g., vocational teachers [T4] and [T5] take part in project activities every year stating that “*I have been actively involved in project activities since 2002 <...>*” [T4;1], “*<...> I take part in one project at least*” [T5;1]. Other vocational teachers who took part in the research, for instance, informant [T1;1], “*<...> took part in international Erasmus+ mobility projects every 3-4 years*”, whereas informant [T9;1] has been involved in projects for a substantial period of time (“*<...> more than 10 years <...>*”). According to informant [T2;3],

“<...> approximately every 2 years <...>, perhaps more often, <...> I always take part in Erasmus+”. It is noteworthy that certain informants tended to take part in project activities as soon as an opportunity presented itself ([T3, T7 and T8]). According to informant [T3;1], “if I have the opportunity and conditions, if I correspond to the target group, I take part as often as practicably possible”. Informant [T7;1] echoed the colleague stating that “if possible, I always participate in project activities. Five projects since 2013”. Informant [T8;2] not just participates in the projects whenever an opportunity arises, but also strives to “<...> initiate the project preparation and search”. As can be seen, vocational teachers are not new to project activities. Informant responses also revealed a fear that they did not have the chance to often participate in projects, as stated by respondent [T6;2]: “<...> i[n] the last two years, I took part in one international project”.

When analysing the typology of projects, the respondents were generally involved in, it was revealed that vocational teachers participated both in national (“<...> in Lithuania – competence improvement programmes” [T7;2]), and international projects (“<...> Leonardo da Vinci, Erasmus+ [T4,2]). It turned out that vocational teachers who took part in the research most often were the participants of projects under Erasmus+ programme aimed at mobility, organisation of educational activities, and competence improvement: “<...> job shadowing mobility, student and staff mobility” [T2;3], “improvement of professional, didactic and social capacities” [T7;2]. According to vocational teachers, “these are profession-related, speciality projects <...>” [T9;2]. Furthermore, the research revealed that teachers not only take part in project activities, but also initiate and draw up the project applications themselves: “since 2002, I have annually prepared and coordinated the EU Education Exchanges Support Foundation projects under Leonardo Da Vinci programme and Erasmus+ as well as social projects <...>” [T8;3].

Thus, most often, vocational teachers participate in the mobility projects for teachers and students under the Erasmus+ programme. The frequency of vocational teachers’ participation in the projects is determined by the intensity of project activities pursued in the vocational training institution and areas of projects implemented. This notwithstanding, all the vocational teachers who took part in the research emphasised that they strove to participate in the projects always, whenever an opportunity arose. This suggests that project activities are a popular method of teaching and learning that promotes the proactiveness of vocational teachers and their motivation for professional activities.

Benefits of project activities for vocational teacher as an individual. Scientific literature features positive assessments of project activities both by students and teachers (Santos, 2020; Gamage et al., 2021; Salcedo-López et al., 2021). In particular, possibilities for rallying community, importance of communication and collaboration relations, opportunity to widen one’s horizon, improve oneself, acquire practical knowledge and skills are emphasised (Vasiliauskienė et al., 2008). When seeking professional and personal success, a human being should develop both their knowledge, functional skills and abilities, and social competences that are inseparable from personal values and beliefs (Zubrickienė et al., 2016). Besides improved competences linked to professional profiles, international mobility of vocational professionals has great impact on their intercultural competences and foreign language skills, greater cultural diversity awareness (Santos, 2020; Salcedo-López et al., 2021). Participation in international mobility activities could also have great impact of teachers’ professional development and career (Salcedo-López et al., 2021). Seeking to assess the benefits of project activities for the teacher’s personality, the informants were asked what, in their opinion, were the benefits of participation in projects for the vocational teachers as individuals.

When analysing the informant responses, the following qualitative subcategories of the category **benefits of project activities for vocational teacher as an individual** were discerned: *growth of self-confidence, courage, responsibility, personality enrichment and transformation of values; international cultural experience; organisational experience, and possibilities for self-expression*. Moreover, the research revealed that the informants assessed the benefits of the project activities viewing them through the prism of international projects.

It is noteworthy that the responses of research participants as a personal benefit identified *stronger self-confidence* that should be linked with greater courage, responsibility, enrichment of personality and transformation of values. In the opinion of vocational teachers, “new responsibility” [T6;2] appeared when participating in projects that enabled the vocational teacher to act in a determined and

courageous manner, and to make the decisions independently in new undefined situations, especially when travelling to another country with their students. For example, as the vocational teacher [T3;2] said, “*after travelling to another country, initially, you feel kind of timid, but you cannot show this to your students, you have to be decisive <...>, you are forced to act; thus, courage is developed and confidence in your abilities*”. This attitude was supported by other research participants [T2, T4, T8], emphasising that before going to another country with students, a screening of project participants is performed. If the vocational teacher passes the screening, “*this gives them self-confidence*” [T8;2] and serves as recognition of their competence. Moreover, vocational teachers identified the changed attitude to common human values, enrichment of their personality, and gaining of skills as personal benefits of participation in activities under international projects [T8;3].

It is noteworthy that vocational teachers mentioned the *intercultural experience gained* as an important personal benefit of project activities. This subcategory is substantiated by thoughts of informants [T7, T4, T3, T8, T9] that prove the importance of gaining international cultural experience for the vocational teachers’ personality. For example, informant [T9;3] noted that “*culture and cultural cognition were the most important to him/her as a human being*”.

Vocational teachers who took part in the study linked the personal benefits of participation in the project activities with *new organisational experience and opportunities for self-expression*. This subcategory was illustrated by statements of informants [T1, T3, T5 and T7] suggesting that they associated personal benefits with professional activities, emphasising the organisational experience and the emergence of opportunity “*to express oneself through communication in another language*” [T1;3], which was important for them as a teacher as well as an individual. Colleagues were supported by vocational teacher [T8;4], who associated self-expression in project activities both with personal desires and their fulfilment, and with the realisation of professional ideas.

When speaking of personal benefits of project activities, the informants also noted a stronger job satisfaction and increased motivation for work, whereas career was mentioned as the benefit of regular participation in projects (“*I see active involvement in projects as a kind of career, both personal and working. This elevates a person to a higher level*” [T9;6]).

In summary of the research participants’ responses, it could be suggested that the personal benefits of participation in projects for vocational teachers involve stronger self-confidence and courage, development of responsibility, enhanced determination to act and make decisions, and new attitude to common human values. Personal benefit of participating in projects is also linked with opportunities for self-expression, improvement of foreign language speaking skills, new intercultural and organisational experience, and career.

Benefits of project activities for vocational teacher’s practical activities. In scientific literature, project activities are defined as educational, cognitive, creative, or scientific activities of the project partners with the view to achieving a common goal and result. According to findings by Günbayı et al. (2016), teachers gain benefits of participating in Erasmus+ projects are “technology usage in lessons and improved of technology use skills as well as broadening horizons”. Initiative and creativity developed through mobility projects enabled vocational teachers to renew teaching material, to adopt new teaching methods, to share good practice and knowledges, implementing new teaching approaches into teaching programs (Egetenmeyer et al., 2011; Starczewska, 2017). Both vocational teachers and learners acting in teaching and learning environment within international mobility activities “can develop and enrich their “international” knowledge, skills, and attributes” as well as they “enriches vocational knowledges by establishing transnational connections and skills” (Tran, 2013, 504;503) and further able to create / stimulate international and national networks (Santos, 2020).

Seeing that project activities are examined in the context of working activities, it is expedient to analyse the benefits of project activities for the practical activities of vocational teachers. Thus, vocational teachers who took part in the research were asked about their opinion on the benefits of participation in projects for practical activities of vocational teachers.

When reviewing the informants’ responses, three subcategories of the qualitative category ***benefits of project activities for vocational teacher’s practical activities*** were distinguished: *improvement of*

professional, foreign language competences, qualification improvement; introduction of innovations and quality of lectures; cooperation with foreign colleagues and common direction in vocational training.

It is noteworthy that all vocational teachers who took part in the study unanimously agreed that participation in projects was beneficial in all respects to students, teaching, and training institution equally. One of the most significant aspects discerned in the informants' responses included *improvement of professional and foreign language competences, and improvement of qualification*. This qualitative subcategory is supported by the statements of informants [T1, T4, T5, T7, T9] to the effect that vocational teachers improve their competences and professional qualification while participating in project activities and, in turn, *“teachers utilise the practical experience in professional activities”* [T1;2]. *“General foreign language and speciality foreign language improvement”* [T7;2], according to vocational teachers who took part in the study, represent a particularly important aspect of project activities. When speaking of foreign language skills' improvement, informant [T4;4] stressed its benefit for both building the cooperation relations, preparing for lectures, collecting information, and analysing literature in the foreign language. A vocational teacher who took part in the study emphasised the benefits of speciality foreign language development: *“when I go to speciality projects, I always check and analyse the specific lexicon of my speciality <...>”*.

The subcategory of *introduction of innovations and quality of lectures* discerned in the course of the study proves that introduction of new technologies in the vocational training process and use of new ways and methods of teaching that are applied in practical activities of vocational teachers as a result of project activities are linked by the vocational teachers directly with better quality of lectures [T3–T5, T7, T9]. Informant [T5;1] tied the introduction of innovations with vocational training diversity and changed or updated teaching-learning setting that is directly associated with the *“better quality of both theoretical and practical lectures”*. According to the vocational teachers, *“during each project, I learn something new and then teach my students to apply the new techniques”* [T7;2]. Moreover, the experience of project participation and benefits of project activities were associated by the informants with the practical application of innovations' introduction: *“we apply the experience gained in vocational training by introducing innovations, testing new methods and technologies of teaching”* [T1;2]. Vocational teachers shared their experiences gained when implementing the projects both with students and other teachers [T6;4].

Another subcategory identified while analysing the informant responses refers to the *collaboration with foreign colleagues and common direction of vocational training*. The study participants listed their relations with colleagues from vocational training institutions of other countries, knowledge of the vocational training system of other countries and curricula as benefits of participation in project activities. According to vocational teachers [T2 and T9], *“participation in projects provides the opportunity to build the relations with colleagues”* [T2;1], and, in their opinion, it was very important that *“the relationships built continued after the project”* [T9;8]. In the course of conversations with the vocational teachers it emerged that cooperation of vocational teachers with foreign vocational training institutions helped set *“a common direction in vocational training”* and strive for *“higher level of vocational training”* [T6;3]. International experience gained in the project activities and common direction of vocational training, according to informant [T4;5], was significant when seeking for international integration.

Analysis of the informants' responses also disclosed that some of the vocational teachers, for example informant [T6;4], specified the changed relations with students, transformation of their attitude to the teacher as the benefits of involvement in projects for the practical activities of vocational teachers. According to the informant, *“in project activities <...> we become substantially closer to students, get to know them better; students start trusting their teacher more, and their attitude to the teacher changes”* [T6;4].

In summary, it can be suggested that benefits of projects for practical activities of vocational teachers can be linked with the possibility to develop competences and improve qualification, introduction of new technologies in the education process, application of new innovative methods of teaching in the teaching process, contacts and relations with colleagues from Europe and other foreign countries, dissemination of experience, most recent professional knowledge, and strengthened foreign language

skills. Diversity of vocational training, international experience, intercultural competence, and international integration, all of them helping shape a common consistent direction of vocational training and striving for a higher level of training, are also unquestionable benefits for the practical activities of vocational teachers. All these aspects cannot be separated from heartfelt interaction, collaboration and relations with the students, facilitated, according to the vocational teachers, by participation in projects and engaging in joint activities when striving for the project results.

Conclusions

Aided by the funding from the EU funds, vocational schools most often take part in international projects (Erasmus+, NordPlus, Interreg Europe) and implement international mobility, strategic partnership and cross-border cooperation programmes involving students, student assistance specialists, school principals, and general education and vocational teachers. Projects implemented in Lithuania, in vocational training institutions that possess the greatest experience of international project activities, pertain to qualification improvement of vocational teachers, introduction of innovations, and renovation and expansion of infrastructure.



Diverse benefits of participation in project activities are enjoyed by all participants of international projects. Benefits experienced by vocational teachers from project activities are oriented to experiential learning, when learning occurs through personal experience. Experiences gained by the participants in the projects while introducing new ideas or technologies, refurbishing the learning/teaching environment, and integrating innovative teaching methods in the curriculum elevate the professional qualification of vocational teachers and simultaneously promote the expansion of their own learning opportunities by getting involved in creation and implementation of new projects.

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Assessment of a Professional Competence of Healthcare Personnel

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Abstract: The role of health care personnel in any medical institution is particularly important. Staff as a resource is the most important and valuable capital that ensures the continuous and systemic functioning of the institution, its development in perspective. The competence and attitude of the employees determine the satisfaction of clients and patients and the outcome of treatment. Therefore, this is necessary for every medical institution to raise professional qualification and training of staff by raising their professional competence. High professionalism increases confidence of clients in medical personal and it manifests the best practice in a particular hospital. The professional development and a lifelong learning of healthcare professionals play a key role according to the requirements of the professional competence of medical personnel. Different EU countries apply different approaches and experience in determining the levels of professionalism in choosing criteria of assessment of quality of medical personnel. *The aim of the study:* is to explore and to analyse the existing procedures for assessing the professional competence of health care personnel. *The methodology of the study:* For the purpose of this study the authors have carried out a questionnaire with nurses aiming at evaluation of their professional competence. *The results of the study:* The authors of the study have analysed the requirement for the assessment of professional competence of health care staff in a hospital as well as data gained in the questionnaire and designed the competence model. *The significance of the study* is to highlight the importance of raising competence of medical personnel

Keywords: competence, health care personnel, assessment of personnel professional competence.

Introduction

The professional development and a lifelong learning of healthcare professionals play a key role in today's professional competence requirement framework. The professionalism of the staff members must be in line with the development of health services by introducing of new services and new medical technologies. The World Health Organization places great importance on patients' safety, which is linked to the competence of the learning system of staff members (WHO, 2004). The document "Key Competences" emphasizes the importance of knowledge, skills, abilities and attitudes in ensuring one's active participation in knowledge society. This is stated in the document: "... to deserve attributes such as 'key', 'core', 'essential' or 'basic', it must be necessary and beneficial to any individual and to society as a whole. It must enable an individual to successfully integrate into a number of social networks while remaining independent and personally effective in familiar as well as new and unpredictable settings" (Key Competencies, 2002, 14).

Recommendation of the European Parliament in the *European Qualifications Framework (EQF)* for a lifelong learning, defines knowledge and skills that need to be taken into account by the medical personnel (Recommendation of the European Parliament...2018). High professionalism increases public confidence in medical profession and ensures a good practice in a particular hospital (Medical Appraisal Guide, 2013).

Uniform procedures for assessing the professional competence of health care personnel, according to the guidelines for Latvian medical institutions are not available. Each institution analyzes the skills and experience of the staff essential in adapting this system to its specific needs and understandings, which would serve as one of the aspects of the quality management system in management of a personal.

However, the need for the competence of a health care personnel is determined by the Latvian regulatory documents, such as the Medical Treatment Law (2017). The Cabinet of Ministers of the Republic of Latvia (Procedures for certification...2012) emphasize the compliance of professional activities of medical personal to certain quality requirements and criteria.

The strategic goal of a quality of the health care system is to reform the health care system in order to achieve efficient processes and to set measurable indicators by providing necessary financial resources, achieving the development and maintenance of sufficient human resources and competence. (Ārstniecības personu un..., 2016)

The quality of health care services can be described in a simple way: to do right things and to make the right decisions based on the right information; to perform right manipulations correctly, for the right patient; to apply medicine to the right patient at the right time at a minimal cost (LR, 2017).

The quality is ensured by the healthcare staff according to their level of professional competence. One of the dimensions of the quality of the health care system is a competence of staff members. The competence involves certain skills of the staff members, their ability to perform treatment and care, as well as to respond to non-standard situations. It is not only a matter of education, certification / recertification, and further education, but also practical experience and continuous training of skills and development (WHO, 2009).

By applying the “*structure-process-result*” approach to the health care system as a whole, one of the structural elements that can be identified is the maintenance and improvement of staff’s competence. One of the tools for its implementation should be professional associations that take care of further education and maintenance of competencies of professionals, certification of medical personnel.

Procedures that Regulate the Professional Competence of Health Care Personnel

The composition of the hospital's health care staff is determined by the appointment of professionals for the required positions. Unfortunately, the hospital also faces a shortage of staff at all levels on a daily basis, but it organizes safe health services to patients.

The performance requirements or standards are qualitative or quantitative indicators that must be met in order to perform duties on a permanent or regular basis (Regulations regarding mandatory requirements...2009). In addition to the fulfilment of goals, this is an important criterion for the results of work performance, as it helps to understand the requirements for the performance of ongoing duties and to assess the quality of the performance of these duties (Vintiša, 2011). In a hospital, when implementing a competency assessment system with criteria and values determined by them, they must be initially reflected in job descriptions, so that the employees initially know the performance of their duties, which would be an incentive for the quality of employment.

The position envisages continuous maintenance of competence and a professional development. Opportunities to maintain professional qualifications in each country are defined quite clearly. The professionalism of health care personnel must be at the same level as the constant development of health services by introducing new services and new medical technologies. Medical technologies are being developed rapidly, therefore medical treatment and medical support personal needs continuous improvement of knowledge and skills. The staff must be ready both, to apply technologies and to provide a high-quality and safe medical service to patients. The World Health Organization pays attention to the importance to patients’ safety, by reducing the risk of harm associated with healthcare to a minimum (WHO, 2009), which is related to a learning system of medical staff.

In Latvia, the Ministry of Health offers opportunities for medical staff and provides medical support for the staff to improve their qualifications by providing opportunities for further education (Darbības programmas..., 2016). Training is available in specific areas of professional knowledge areas of treatment, as well as general knowledge and skills.

The Latvian Medical Association and professional associations play an important role in the professional life of doctors, and the professional life of nurses as represented by the Latvian Association of Nurses. The hospital's healthcare staff is involved in a hospital's 'in-house' training program, which is developed for one calendar year. The heads of departments develop training programs by choosing training topics for their activity profile. The hospital develops a close cooperation with Riga Stradiņš University by creating a resident clinical training base that helps clinicians to maintain and to improve their professionalism. Within the scope of their competence, health care personnel voluntarily participate in international events: congresses, conferences, which are highly supported by both employers and professional associations. Theoretically, the procedure for

evaluating managers exists, but there is no practical application of it. There is no interest in the results of the evaluation either from the managers or from the management of the hospital due to the lack of mutual communication. Until 2018, the evaluation procedure was applicable only to hospital managers. The result of the assessment is used as a basis for a decision on the employee's suitability for the position to be held, transfer of the employee to another position. This staff's appraisal is more commonly used in hospital practice for its simplicity, but it is not regular and comprehensive for staff. The coverage of their professional competencies is insufficient, partially uninformative, without matching results with the staff's professional development, motivation for career opportunities, feedback, and a compatible with the remuneration system.

Professional Competence of Health Care Personnel

The term "competence" is used in everyday communication with different meanings - both in as the authority and as a competence, but in a contemporary understanding of a personnel management, most often the term is used to describe employee's behaviour or patterns of action in a typical situation at work. The term describes and explains how work should be done (Vintiša, 2011). In Latvian, the term "competence" means both competence, erudition, or special knowledge, as well as the field of activity, rights and power in a certain field or jurisdiction (Tilde Dictionary of., 2022).

The understanding and the use of the term 'competence' in the Latvian language is determined by the LAS Terminology Commission Decision No. 84 (Par termina "kompetence"... , 2009). The term competence in the Latvian language is used in the singular form with necessary knowledge, professional experience, understanding in a certain field and the ability to use knowledge and experience in a specific activity. The competence of an employee is evaluated by the surrounding people, cooperation partners, and the society.

In the management science, the "competence" characterizes an individual's abilities and skills. The term 'competence' refers to a set of knowledge and skills in the organization. The essence of a concept in jurisprudence means certain responsibilities and areas of authority. M. Gowie and co-authors suggest core competency framework of nurses that includes soft skills as well, such as compassion, interaction skills with others, interpersonal communication skills. The authors argue that the assessment of competencies must be a dynamic process with periodical reviews in order to improve the quality of performance (Gowie et al., 2020). Other researchers emphasize that work in demanding circumstances requires productivity and creativity (Milena et al., 2011). The authors define competencies as a combination of knowledge, skills and behaviours possessed by individuals. In their proposed competency framework, they include such competencies as communication, team building, planning, priority setting, and problem solving competencies along with managerial competencies. M.R. Stanyon and co-authors in their study report that after a detailed exploration of competencies that are necessary for nurses, the authors have identified 22 competencies as essential for nurses in care homes. Among them are relationship-centred care, assessment and care planning, enhancing well-being and maintaining ability, pain management, attentiveness to cultural, spiritual and sexual needs of patients, team working, reflective practice and others, quality improvement and evidence-based practice and others (Stanyon et al., 2017). R. Meretoja and L. Koponen developed a model that compares nurses' optimal and actual competencies in the clinical setting and concluded that this is essential to develop a shared understanding of competency requirements of patient care by combining optimal competence profiles that can contribute to targeted continual learning and educational interventions (Meretoja et al., 2011). As T. Huey-Ming in their study point to the relationship that exist between nurses' competency and performance. Their findings may serve as a guide to improve training programs for nurses with placing greater emphasis on the competencies that are necessary for providing high quality of nursing services (Huey-Ming, 2004).

Uniform procedures for assessing the competence of health care personnel and guidelines for the Latvian medical institutions are not available. Each institution defines the competence, skills and experience of the staff by adapting this term to its specifics, needs and understanding. Most of the staff's competence is related to the compliance to the job description, set of duties, leaving the professional development of the staff and further education under the responsibility of the employee. The implementation and maintenance of the health care quality management system determines the

need for staff competence assessment, purposeful improvement in the provision, implementation and necessity of the basic goals of the health care institution.

The system of performance of personnel is based on competence assessment introduced in the public administration in Latvia and is applied to the medical personnel of the Emergency Medical Service (NMPD). The professional competence of a nurse was explored according to the levels of self-assessment criteria (Miķelsone et al., 2016). The experience of evaluation of health care personnel in Latvia is not widely available, as this process is mostly just stated in the medical institutions. As a mandatory measure, those health care institutions whose quality management systems have been assessed and certified in accordance with the international standard of them LVS EN ISO 9001 "Quality Management Systems. Requirements".

The assessment of medical staff in the United Kingdom is linked to the recertification of medical practitioners and is carried out in accordance with the Medical Appraisal Guide (Medical Appraisal Guide, 2013). In turn, the Indian Institute of Planning and Management offers the use of continuous appraisal systems for the professional appraisal of the staff members (Kundu, 2015).

The aim of the study was to explore and to analyse the existing procedures for assessing the professional competence of health care personnel.

Methodology

The study was carried out in a health care institution - "X" hospital, where 1040 medical staff members have been employed from 2019 to 2021. *The main research questions were:* How do nurses assess their professional competence? How do they link their professionalism to the growth opportunities and how do they maintain it? In order to select the sample, the authors have applied the principle of free choice according to different research methods. The participants of the study were health care professionals. In total, 20 practicing nurses and nine heads of the middle-level departments have participated in the study. A structured questionnaire was developed by the authors of the paper in Latvian, which includes questions aiming to find out the opinion of nurses on the general principles of competence assessment, and the existing procedures in the hospital. The study involved 20 hospital nurses. The experience of work of nurses is more than five years long. The questions were related to the experience of assessment of nurse's competence, or a lack of it, attitudes towards a particular job, desire to link one's professionalism to the growth opportunities or to maintain it formally, development, career development, linking assessment to the hospital's payment system, or by indicating a hindrance to daily work, and the provision of healthcare to patients. The respondents provided the answers to all those questions.

Results and Discussion

According to the collected data, it was found out that the majority of nurses have acquired the 1st level professional higher education; 45% of nurses have received the 2nd level of professional higher education and 15% have completed a nursing school. The length of service of nurses who took part in the survey ranges from 5 to 38 years.

The answers provided by nurses about the competence assessment indicates to a correct understanding of their competence, as evidenced by 95% of nurses. However, by answering the question whether a competence assessment has been performed in the hospital or at their workplace, the nurses answered it in a negative way (60% of cases). 40% of nurses reported about annual assessment of competence in their departments by senior nurses, but this has only been done in the last 2 years. This leads to the conclusion that since the assessment of the competence of all staff introduced in the hospital in 2018, it has been performed only partially.

The analyses of all the answers to the question about the need to assess the competence of staff members, allows to conclude that 90% of nurses indicated to the need to measure the competence. On a question, whether it affects the performance and quality of the nurse's job responsibilities or not, 75% indicated in an affirmative way, while 25% of nurses acknowledged that the assessment of competence would not affect the quality of work performance. It can be concluded that staff would encourage employees to perform their duties better. Identical answers were provided about the

commitment to competence assessment not only through a better performance of job responsibilities, but also through the incentive for career advancement, as it was indicated by the 75% of nurses. In regard to the relationship that exists between the results of the competence assessment and the salary, and if it may affect the quality of the work. The answer was affirmative in 45% of cases and negative in 55% of cases.

As a result of the analyses of the data about the interest of nurses in the professional development, the authors received 30% of negative answers, that indicates that the staff does not feel support, encouragement, while 65% feel interest and support from the management and 5% reported that this is hard to judge.

The answers about the opportunities to participate in the professional development in the hospital indicate that 95% of nurses provided positive evaluation and that nurses themselves participated in the internal training process in the hospital units and (95%) of nurses provided affirmative answers. However, the learning process mostly is related only to the formal acquisition of education, as this is important in a recertification to maintain a professional competence of a nurse.

The summary of the results of the questionnaires allows to conclude that the staff understands the need for assessment by acknowledging that it will affect the quality of work and it leads to a self-growth. Professionalism is associated with the training process, its necessity and participation, but it is formally related to the need for further education and for the maintenance of a certificate.

The expert interviews were agreed with the heads of 9 mid-level departments of the hospital, who expressed their opinion on about the assessment of a competence in the hospital and the opportunities to improve the assessment procedure by examining the competence model proposed by the author (Figure 1) by answering set questions. Respondents support the benefits of staff appraisal at work that would ensure a professional competence, efficiency, and a quality of work.

The respondents reported about the evaluation process in their daily work as a disruptive measure, which is time-consuming, bureaucratic, as it is being carried out formally. However, after the analyses of the author's competence model, the respondents more often expressed their understanding and indicated that the proposed competence assessment procedure is much more purposeful, useful, and understandable and even necessary. The competency model offers a sequence in activities and training of personnel. The model highlights all the factors that influence work responsibilities of the staff, such as professional skills, theoretical knowledge, indicators of health care quality. Therefore, as a result of the discussion, managers pointed to the processes that promote evaluation in daily work: development of training, improvement of quality of work, opportunities to attract the remuneration system, in maintaining communication and feedback between the employee and the management.

In regard to the personnel competence assessment requirements in the regulatory documents, the answers were partially correct. Respondents were familiar with the procedure of registering medical practitioners, professional standards, certification procedures, and were less informed about the connection between the Medical Treatment Law and Cabinet Regulation No. 60 (*Darbības programmas...*, 2009).

The opinion of the experts about the suggested training system in the hospital was quite supportive. The managers reported about a successful implementation of training activities in the hospital, which are implemented with the support of the European Union's European Social Fund within the framework of the non-formal education program for the medical staff. The competency model proposed by the author explains many options for the professional development, by indicating specific opportunities outside training, such as international events, exchange events, participation in research, participation in scientific research, and in the learning processes. In turn, internal training activities should start with the training processes organized by the unit itself, where the employees themselves participate as lecturers. For the training to be successful, this requires simulations, demonstration, and evaluation of the work in special teams, analysis of undesirable events and side effects, performance of work, and a presentation of achievements. The author points to a wide range of opportunities for the participation of a hospital in training process. Financially, by providing compulsory courses, by attracting guest lecturers, and by providing work-based practice for the residents, nurses, and

laboratory assistants. The respondents emphasize that when planning and organizing such training in their structural units, the level of competence of the staff members must be in a high level.

The respondents are willing to use the proposed competency model for the development of an evaluation system in the hospital. The evaluation is positive. The model is detailed, by creating an understanding of the need for the staff competence assessment for both the employee and the hospital. The members are motivated and see the benefits. Managers pointed out that the appraisal of the staff should not be spontaneous. This should be done in a team, guided by specific actions and correct assessments, without offending the employee.

Figure 1 COMPETENCE MODEL

(Author's design)

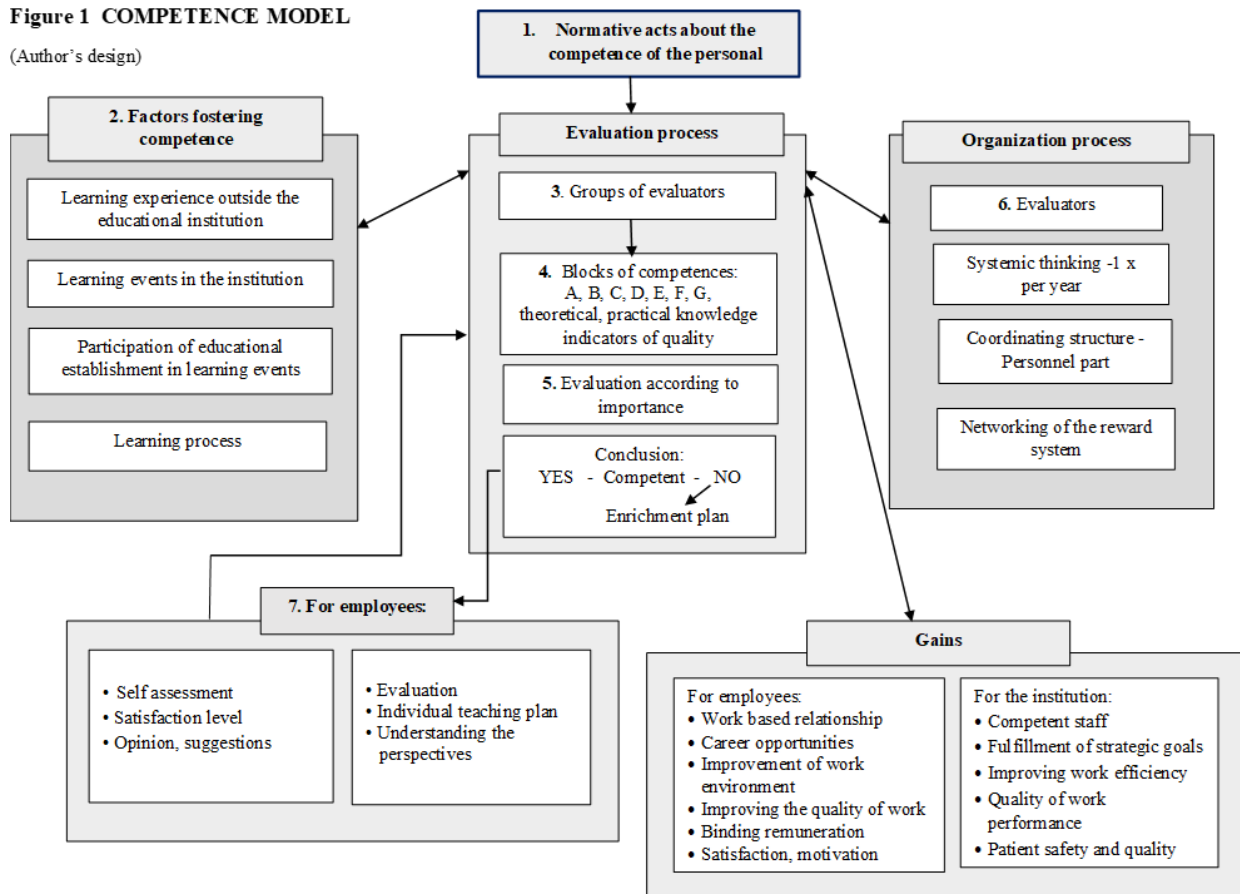


Figure 1. Competence model (Author's design)

The shortcomings of the evaluation system in the hospital that was indicated by the respondents, were as following: the evaluation does not cover all groups of health care personnel positions, the assessment is not systematic; it is formal. Evaluation criteria are not clearly defined, and staff evaluation is not linked to the remuneration system. Managers emphasize that the current appraisal system is confusing and time-consuming. They do not see its usefulness for the employee or the department itself. The lack of competence assessment causes problems with the staff members who do not perform their job duties professionally enough. There is a need for influential tools to motivate the employee to raise their professional development. The staff appraisal system in the hospital does not show the potential of each employee to succeed in their professionalism.

Conclusions

The professional development and a lifelong learning of health care professionals play a key role in today's professional competence requirements. The aim of the study was to explore and to analyze the existing procedures for assessing the professional competence of health care personnel. A campaign-like approach to staff appraisal has no lasting result in the provision of a quality health care services. It does not promote the professional development of staff. The improvement of the competence assessment system can be carried out by developing methodological guidelines, regulations, based on 360-degree surveys, peer assessment, patient feedback, individual self-assessment, situation analysis

and the author's developed competence model. Work on maintaining a comprehensive assessment of staff competence must be continuous, systematic, taking into account its cyclical nature.


The research results allow to conclude that the existing system of competence assessment in the hospital does not allow to assess comprehensively the professional competence of health care staff and employees' potential. The result of the assessment may affect the job performance and a career growth of personnel. In the hospital, the assessment of staff's competence is not systematic, it is formal and does not cover all positions. Its objectives must be mutually beneficial and binding, well-defined and achievable. The staff who must be eligible to carry out evaluation must be direct managers and the representatives of the human resources department. This study was focusing on ensuring the competence of staff through internal policies and good medical practices that would increase professional competence and improve the quality of health care personnel.

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Supervision as Support Opportunity in Adaptation of New Employees during Covid-19 Emergency

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Abstract: The research aim is to find out whether the adaptation of new employees is affected by the rapid transition to remote work due to the Covid-19 emergency and to find out is there a need for consultative support for new employees during this time. The study included a two-part survey assessing the adaptation of new employees and the need for consultative support. The survey of new employees included 94 respondents from various industries, who worked in their workplace for less than a month to an average of one year. Respondents were from transport and logistics, marketing, advertising and public relations, education and other fields working in the office or administrative sector which is most exposed to remote work. Summarizing the results of the study, it was concluded that there are no statistically significant differences between the self-assessment of adaptation of new employees and on-site or remote work. However, there were statistically significant differences between remote work and the need for consultative support. The impact of the remote work on the adaptation process in this study appeared as a partial influencing factor. The purpose of this study is to identify the general changes that emerged during the Covid-19 emergency situation and make a basis for further research.

Keywords: supervision, new employees, adaptation, remote work, Covid-19

Introduction

Nowadays, companies need to constantly remain vigilant and flexible to adapt to various unexpected conditions, such as climate change, economic downturn and political stability in the world, which create uncertainty and threat to their operation and development. Currently, all of the processes are interrelated, and, therefore, issues in one region have impacts on countries internationally as well. This is also evidenced by the recent outbreak of the COVID-19 virus which has brought along rapid changes globally, as organisations are forced to adapt their targets, strategies, and also pursue new approaches in human resource management. New changes in the working environment have occurred along with the restrictions created by the COVID-19 with regard to communication, mobility and hygiene requirements. A large part of companies have changed to working remotely lately, and this means that the routine on-site company processes need to take place remotely. The swift transition to remote working environments causes new challenges to emerge. Employees face higher risks of experiencing lack of communication and motivation, receiving support from their colleagues or the management, and this has negative impacts on the their well-being, particularly among the new employees who have not integrated in the company environment yet.

Researchers have traditionally considered a new employee to be an individual who has worked in their position for an average of two to three years (Wang et al., 2018), (Gundry, 1993). Other authors have used the service length in the organisation or the age to define a new employee (Henderson, 1999; Thornhill et al., 2003). It is clear in this context that the term “a new employee” is a short-term or terminable phenomenon, because it is influenced by the individual’s understanding of what “new” is, and, to a large extent, it is also influenced by the length of employment of the employee in the organisation. The longer the time of employment, the less likely an employee is to be considered as a new one (Rollag, 2007). Researchers Klein and Heuser have divided the employee onboarding process into eight consecutive stages taking place from the first day and up to one year of working (Klein et al, 2008). Considering that the definition of a new employee is a biased phenomenon, the viewpoint of Klein & Heusera (2008) has been chosen as the basis of this research study, i.e., a new employee is an individual who has worked for the organisation for up to one year and who is subject to formal and informal onboarding measures within the organisation.

Theoretical knowledge suggests that adaptation is a process in which a living thing changes over time to be able to continue to exist in a particular environment (Cambridge Dictionary, 2021). In corporate contexts, this process can be viewed as accommodation of the new employee to their new role and environment by integrating into the corporate processes, procedures and culture (Klein et al., 2012). Various measures are taken to make the process of socialising the new employee as swiftly as possible. This is also known as a process of learning and accommodation in which the new employees accept their role within the organisation while meeting the needs of the particular individual and the organisation (Chao, 2012). Inefficient adaptation (onboarding) of new employees not only reduces the benefits a talented and trained employee might achieve, but also increases the probability that the hard work spent on integrating the new employee will be wasted (Smart, 2012).

Research studies suggest evidence of several positive onboarding measure benefits for the organisation and the new employee, such as better clarity of the roles, efficiency, better quality of work, staying longer in the workplace, and job satisfaction (Bauer et al., 2007; Fang et al., 2011). The new employees who integrate better in the organisation have higher levels of job satisfaction and affiliation with the organisation, stay in the organisation for longer, and are more efficient at work. Those who have experienced a poorly organised process of integration, in their turn, have right the opposite feeling of lower job satisfaction, more frequent changing of jobs, higher costs for the organisation, lower levels of productiveness, and poorer performance at work (Bauer, 2010).

During the onboarding period, the new employee needs support which helps them settle in, acquire the job obligations and socialise with the other employees of the company (Ashforth, 2001; Klein et al., 2008; Klein et al., 2015). There are several support options. For instance, Ešenvalde specifies that, in a company, it can be the human resources manager who is responsible for various personnel activities and implementation of support programs (Ešenvalde, 2014). This role is often assumed by the direct supervisor of the employee or a senior specialist, also called the mentor.

One of the forms of providing support to an employee is supervision. It is a consultative form which is considered to be a resource for handling various occupational challenges, but also has a significant role in the context of the development and education of professionals. Supervision is considered to be one of the most efficient and contemporary forms of professional improvement where not only new knowledge and experience are acquired, but also solutions to certain problems are found, the client gets an opportunity to see the situation from various perspectives, thus creating new ideas and getting rid of old percepts (Mārtinsone et al., 2017). The mentioned benefits from supervision include monitoring of own professional activities, evaluation of risks and opportunities, seeing new opportunities and resources, and also widening of the perspective (Pumpiņa, 2021). Several research studies in Latvia also emphasise supervision support for prevention, and lowering the levels of, burnout amongst employees in various sectors (Zakriževska-Belogrudova, 2020). 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 (Zakriževska, 2016).

The current research studies into the efficiency of remote working environment have been conducted among employees who have opted for such format of working voluntarily, but there is a lack of research data regarding the efficiency of working remotely under Covid-19 conditions, which most of companies were not ready to introduce. The first research studies already conducted into remote working experience in China suggest that problems associated with a rapid transition to remote working environments have already been identified in this context. For example, its impact is that employees experience inefficient communication, a misbalance between their job and private life, lack of socialisation, and procrastination (Wang et al., 2020). The timeliness of the topic is more frequently addressed in other research studies as well, where experts warn that the consequences of the current pandemic are far from the final outcome. The risk of health crises exists in the future as well, therefore

it is essential to have a discussion to seek ways of adapting to the consequences of the COVID-19 pandemic while taking care of the wellbeing of the employees (Carnevale et al., 2020).

The aim of the research study is to find out what onboarding of new employees is in the COVID-19 emergency situation, to identify the factors that influence adaptation, and to establish the need of the new employees for consultative support.

Research questions: 1. Which of the adaptation factors has the strongest impact on the self-evaluation of adaptation among new employees? 2. Are there statistically significant differences between the adaptation factors and onsite or remote working? 3. Are there statistically significant differences between the work format and the need for consultative support? 4. What levels of need for consultative support do new employees have in the adaptation period?

Methodology

Quantitative research method was selected for the study. A web-based new employee questionnaire was chosen as the basis. The participants were new employees who had started their employment during the COVID-19 emergency situation (years 2020-2021). The research study was conducted between April and May 2021.

Research participants. The participants in the New Employee Survey included 94 respondents from various occupational sectors, who had started their employment during the restrictions associated with the COVID-19 pandemic. Out of the 94 participants in the survey, 80 are females and 14 are males. The percentages by the duration of working in the organisation are the following: 38% of the participants have been working for 3 to 6 months, 31% have been working for 1 to 2 months, and 13% have been working for up to one year. The percentages by working onsite or remotely are the following: more than a half (53%) work entirely remotely, one third (27%) work partially onsite and remotely, and 20% work onsite. The obtained data suggest that 80% of the survey participants have daily experience of performing their job obligations remotely.

Research survey. The questionnaire was designed using two concepts – onboarding of a new employee and need for consultative support. The questions of the survey were included in eight sections: 1. Demographic data. 2. Clarity of the job goals and obligations of new employees. 3. Communication (and awareness) within the organisation. 4. Observation of occupational boundaries. 5. Getting support within the organisation. 6. Conduct of training and evaluation thereof. 7. Self-evaluation of adaptation. 8. Evaluation of need for consultative support. The analysis of the questionnaire included a review of the correlations between the new employees' self-evaluation of adaptation and the adaptation factors. The adaptation factors were evaluated using the Likert Scale where 1 is "Disagree", 2 is "Rather disagree", 3 is "Rather agree" and 4 is "Agree". Self-evaluation of adaptation, in its turn, was expressed on a 10-point scale where 1 is "I am totally not adapted" and 10 is "I am fully adapted". A substantial component of this research is consultative support opportunities for which questions were included to find out whom new employees approach to receive support, whether they are currently in need of any additional support, and what particular support they would like to receive (specifying the areas they would like to discuss or receive information about). Multiple-choice questions were included to obtain these data.

Data processing methods. The processing and analysis of the data obtained from the survey were carried out in the PSPP statistical data processing software.

Research study restrictions. The target group of the survey was not easy to reach, therefore the sample of the survey was obtained in two ways: randomly on the Internet and based on snowball sampling or recommendations of the survey participants. One participant of the survey recommended another new employee from their friends, colleagues and acquaintances. Due to the sample of the survey, the research study data cannot be attributed to entire Latvia, but their purpose is to highlight the trends new employees are to face in the COVID-19 emergency situation and to establish the fundament for further research in individual sectors.

Results and Discussion

In order to verify the reliability of the survey scales, the results were tested using Cronbach's α (alpha) for each individual statement separately and for the overall data set. Cronbach's α (alpha) was determined for all five factor scales where multiple choices were included according to Likert scale.

Cronbach's α (alpha) shows that the adaptation factor scale data are reliable. Scales "Goals and Job Obligations" have the Cronbach's α (alpha) of 0.88 ($\alpha > 0.8$), the scale "Occupational Boundaries" have the Cronbach's α (alpha) of 0.80 ($\alpha > 0.8$), and the scale "Communication within Organisation" has the Cronbach's α (alpha) of 0.89 ($\alpha > 0.8$), which suggests very high reliability. The Cronbach's α (alpha) of 0.94 ($\alpha > 0.9$) for the scale "Support within Organisation" and that of 0.97 ($\alpha > 0.9$) for "Training" suggest outstanding reliability of the item scales.

When finding out the extent of feeling adapted in their place of work among new employees on a scale of 1 to 10, where 1 stands for "I am totally not adapted" and 10 stands for "I am fully adapted", it was discovered that most of the respondents rated their adaptation as good or very good. 26% have given the rating of 8, and 21% have the rating of 7. Comparatively frequently, the participants of the survey have also given the rating of 9 or excellently adapted (15%) and 10 or outstanding (10%). Nevertheless, it should be taken into account that a considerable part of the respondents have rated their adaptation as average or even poor. Rating of 5 and below have been given by 19% of the survey participants (Figure 1).

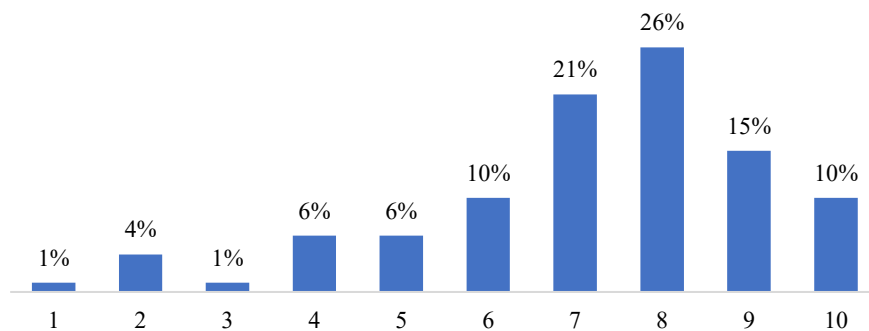


Figure 1. Percentages of Survey Participants Based on Self-evaluation of Adaptation (scale of 1 to 10, where 1 stands for "I am totally not adapted" and 10 stands for "I am fully adapted")

As the results of the survey suggest, most of the new employees currently feel that they need consultative support in the adaptation period and their career growth. 45% of the respondents agree that consultative support would be valuable currently. One third (29%) indicated not being sure about whether it is currently necessary, and 26% noted that such support is currently not required (Figure 2).

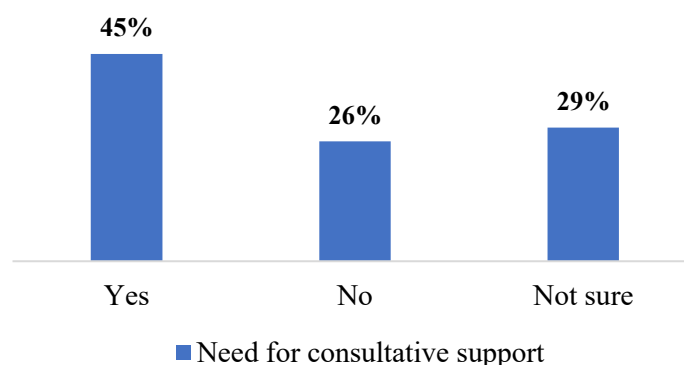


Figure 2. Percentages of Respondents Based on Need for Consultative Support

Among the respondents who acknowledged that consultative support would be useful currently and among those who are not sure about its necessity, it was also identified what support options would be the most useful. The obtained survey results suggest that the need is the highest for improvement of professional competence (61%), willingness to receive feedback regarding own occupational activity

(51%), and minimisation of stress factors (49%). It is also essential for new employees to discuss fear, concerns or mistakes associated with their occupational activity with no condemnation (44%), discuss alternative options and solutions (23%), improve communication with the colleagues, management and clients (23%), and also to receive support (21%). The mention of strengthening occupational boundaries is uncommon (19%), although a large part have specified that they find it difficult to maintain the occupational boundaries in the working environment.

The obtained results of the survey suggest that, on average, a half (51%) of the respondents rate their onboarding in the organisation as very good (values between 8 and 10). Nevertheless, many of (45%) the new employees indicate that additional consultative support would be useful in this time of change.

Linear regression

Linear regression analysis was performed to find out which dependent variables have the largest impacts on the new employees' self-evaluation of adaptation. Table 1 shows that the overall determination coefficient $R^2 = 0.74$ suggests that the five factors included in the questionnaire explain 74% of the variations in the self-evaluation of new employees among the new employees.

Table 1

Linear Regression Analysis for the New Employee Onboarding Survey

R	R value	Adjusted R value	Standard deviation
0.86	0.74	0.73	1.08

Data are statistically significant at a sig. value below 0.05. In this case, the regression sig. value is 0.00, suggesting that the data are statistically significant (Table 2).

Table 2

One-way Dispersion (ANOVA) for the Adaptation Scale

	Sum of values	df	Mean value	F	Sig. value
Regression	307.31	5	61.46	63.47	0.00

In the establishment of the adaptation factors with the highest impact on the new employees' self-evaluation of adaptation, statistically significant correlations can be seen between adaptation and clarity of the goals and job obligations (sig=0.00) and communication with the organisation (sig=0.04) (Table 3).

Table 3

Table of Coefficients

	B	Standard deviation	Beta	t	Sig. value
Goals and job obligations	0.89	0.20	0.35	4.35	0.00
Communication within the organisation	0.59	0.20	0.24	2.99	0.04
Occupational boundaries	0.38	0.25	0.10	1.54	0.12
Support within organisation	0.61	0.23	0.22	2.71	0.08
Training	0.27	0.13	0.16	2.02	0.46

The linear regression analysis leads to a conclusion that statistically significant correlation exists between the adaptation factors included in the survey and the new employees' self-evaluation of adaptation. Two factors (clarity of goals and job obligations and communication within the organisation) have the highest impact on the adaptation of employees.

One-way dispersion analysis (ANOVA)

One of the tasks set in the research study is to find out whether there are statistically significant differences between the adaptation factors and the new employee's working onsite or remotely. The sig. values in the table allow to conclude that there are no statistically significant differences between the work format and the adaptation factors, as all of the values are above 0.05 (Table 4).

Table 4

One-way Dispersion Analysis for Adaptation Factors vs. Work Format

Factor	Sig. value
Clarity of goals and job obligations	0.29
Communication within the organisation	0.82
Observation of occupational boundaries	0.30
Support within organisation	0.59
Training process	0.07

In the establishment of whether there are statistically significant differences between the new employee's working onsite or remotely and the need for consultative support, statistically significant data were obtained, as the obtained sig. value is 0.03 (Table 5).

Table 5

One-way Dispersion Analysis for Work Format vs. Need for Consultative Support

	Sum of values	df	F	Sig. value
Consultative support vs. work format	66.61	93	6.26	0.03

The highest levels of need for consultative support can be seen in the group of respondents working remotely (27%) and partially onsite and remotely (13%). Those working onsite in their workplaces, in their turn, indicate more frequently that they are not sure whether consultative support is currently necessary for them (Table 6). The data obtained from the survey confirm that there are differences between the need for consultative support and the new employee's work format.

Table 6

Percentages of Work Format vs. Consultative Support

Work format	Consultative support			Total
	Yes	No	Not sure	
I work onsite	3.2%	5.3%	11.7%	20.2%
I work partially onsite and remotely	12.8%	8.5%	5.3%	26.6%
I work only remotely	28.7%	12.8%	11.7%	53.2%
Total	44.7%	26.6%	28.7%	100%

In-depth analysis of the data leads to a conclusion that the results of the evaluation for statistically significant correlations between the adaptation factors and working onsite or remotely do not provide evidence for statistically significant data. However, the analysis of the results of the survey suggest that there are statistically significant differences between the need for consultative support and work format. In this case, the group of respondents working remotely have the highest levels of interest about consultative support in the period of adaptation.

Other research studies have looked at the influence of external and internal factors on employee satisfaction with working remotely. The research studies suggest that employees feel both positive and negative effects of working remotely, such as having more opportunities for spending time with the family and saving time that is spent on travelling to work, but, at the same time, they find it more difficult to maintain motivation, lose balance between their job and private life, and experience lack of emotional support and stress in dealing with matters related and unrelated to job simultaneously (Matli, 2020; Wang et al., 2020). In this research study, lack of support was not identified as one of the primary factors that

influence the new employee onboarding process, but the questionnaire confirms the high levels of stress among the new employees (49% noted that they would like to receive support regarding this).

Studies into employee onboarding in the COVID-19 circumstances mention that the most substantial factors which influence the onboarding of new employees are 1) clarity of roles (understanding of job obligations and requirements), 2) being sure of own ability to handle the new role, and 3) social acceptance (being part of the team) (Scott et al., 2021). As the results of this research study suggest, the identified tendencies are the same as those identified in the studies conducted by other authors, and this suggests that, in remote work environments, it is of particular importance to take care of the clarity of the new employee's roles and their communication with the colleagues in order to assure successful adaptation (onboarding) in the organisation.

Conclusions

The linear regression analysis suggests that the most substantial factors influencing the new employees' self-evaluation of adaptation include clarity of the goals and obligations and communication within the organisation (clear turnover of information, awareness of the internal processes, traditions and measures), which suggests that role clarity and awareness become particularly significant when employees work remotely.

The aim of the research study was to find out whether rapid transition to working remotely influences onboarding of new employees and the need for additional support. The results of the research study suggest that there are no statistically significant differences between the adaptation factors and working onsite or remotely. This means that no significant differences are seen between how their onboarding is rated by those working remotely, onsite, or partially remotely. However, there are statistically significant differences between the work format of the new employee and the need for consultative support.

The obtained data suggest that the highest levels of need for consultative support appear among the employees working entirely remotely (27%), with the group working partially remotely and onsite coming next (13%). Those working entirely onsite during the COVID-19 pandemic, in their turn, indicate most frequently that they are not sure about the need for such service.

Almost one half (45%) of the surveyed new employees believe that consultative support would be useful during the onboarding period and in their career growth. 29% are unsure whether such service is necessary, and almost the same percentage (26%) note that no consultative support is necessary.

When specifying what consultative support opportunities would currently be the most essential for the new employees, the three most frequent needs are improvement of occupational competences (61%), feedback regarding own occupational activity (51%), and minimisation of stress factors (49%).

Given that 49% of the new employees indicate that they would like to receive support regarding this issue, a suggestion would be having a cycle of educational lectures and a cycle of supervisions regarding the mitigation of the influences of stress factors while working from home.

The manager plays a crucial role in the onboarding of a new employee, and, therefore, managers might find the opportunities offered by supervision for the improvement of skills and the support in the new employee onboarding process particularly useful.

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