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**AUGSTĀKĀ IZGLĪTĪBA**  
*Higher Education*



## BUILDING A CULTURE OF CREATIVE THINKING IN BUSINESS STUDIES

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**Abstract.** *Creativity is considered as an intangible characteristic that drives business to success. Creative persons play an important role in fostering both technical and social innovation and progress. Contemporary higher education graduates are expected to possess soft skills including creative thinking, problem-solving, critical thinking, flexibility, motivation, positivity and others. Therefore, the research was designed with the aim to enhance the understanding of the concepts of creativity and creative thinking and to address the question of how creativity and the process which we use when we come up with a new idea can be enhanced within and by higher education institutions. This study examines a creativity-driven study environment to promote a safe, non-judgmental atmosphere and the Creative Platform process meant to develop creativity during regular practical tasks to make it an involuntary reflex and to discover new viewpoints, perspectives, and solutions to any business problem. The framework of the research is based on the analysis of literature and experimental research methods. The results revealed that using special techniques, purposeful creative thinking can be developed beyond creativity subject. Moreover, interdisciplinarity teams lead to better solutions.*

**Keywords:** *business studies, creativity, Creativity Platform, creative thinking.*

### Introduction

It is a time of societal transformation, changes, and innovations. We used to study and practice hard to acquire hard skills – a prove of our competence. Nowadays ignoring soft skills – critical thinking, creativity, flexibility, communication, teamwork, adaptability, and others, is one of the principal career mistakes one could make. In the coming decades, not much progress will be made without creative thinking.

No doubt the focus should be laid on transforming the teaching and learning process at higher education institutions. The teaching-learning process should continually foster creative thinking and creativity should become an integral part of any studies.

The article aims at investigating the concept and the main elements of creativity as well as their impact on the creative result. To achieve the aim the following tasks were set: to explore the elements of creativity; to introduce the Creative Platform paradigm to be used to enhance creativity in business studies; and to organize the idea generation sessions at the higher education institutions providing studies in the business field in three different countries – Austria, France, and Vietnam.

85 students participated in the 8-hour idea generation sessions under the Creative Platform methodology. The received data was analyzed and the results were discussed as well as further research possibilities indicated.

### Literature review

With reference to the previous Mačerauskienė and Turčinskaitė-Balčiūnienė article *Do differences make a difference? The case based on the creativity platform* (2017) as a part of the result of the longitudinal research, we should define the concepts of creativity and creative thinking. Creativity is commonly defined as the process of generating new ideas that are original, practical and valuable solutions to the existing problems (Barron, 1988; MacKinnon, 1962; Guilford, 1967; Sternberg & Kaufman, 2010). Yet the process is a somewhat different one for each person. A pioneering model of four stages of the creative process conceptualizes the architecture of creativity (Wallas, 1926) (see fig. 1.).

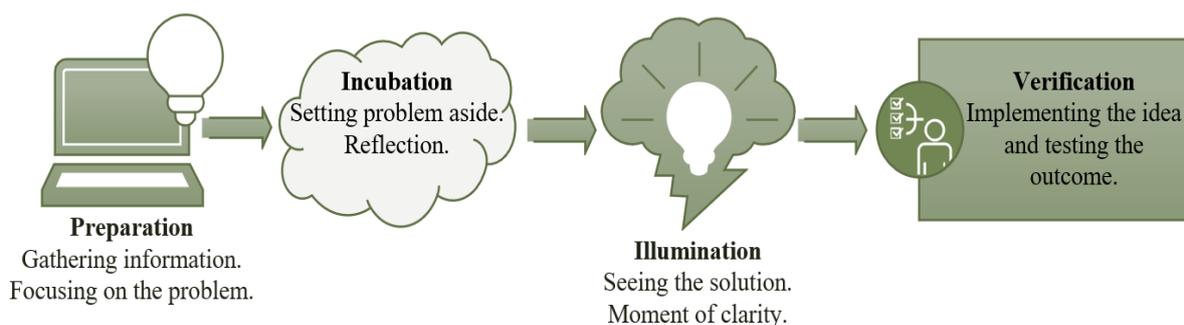


Figure 1 *The process of generating new ideas* (Adapted from *The art of thought* (p. 10) by G. Wallas, 1926, London: Jonathan Cape)

If we dig deeper into the definition of creativity, we discover other worth mentioning implications. Creativity implies 1. An aspect of the creative product – outcome or result of the creative process; 2. An aspect of the creative

agent/ person; 3. An aspect of the creative environment/ press (Rhodes, 1961; Brown, 1989; Davis, 2004).

Plucker, Beghetto and Dow (2004), Tardif and Sternberg (1988) recognize *An aspect of the creative product* as the most objective approach to creativity - a specific solution to a problem or evaluation of a concrete product. These are new mechanisms, programs, tools, publications, pieces of music, services, etc. Creativity studies emphasize that the outcome or result of the creative process must be innovative, exclusive, and valuable.

Besemer (1998) and Besemer and O'Quin (1999) identified three key factors of the creative product: originality (e.g., original, surprising), quality (e.g., logical, useful), and elegance (e.g., organic, well crafted).

The creative product often depends on the *aspect of the creative person or personality*. Creative achievement requires several personality attributes. Attention is given to flexibility, openness to new ideas, self-confidence, tolerance to ambiguity, courage, curiosity, and persistence (Dawson & Andriopoulos, 2014; Sternberg & Kaufman, 2010). Quite a number of researches examine the link between intrinsic motivation and creativity - "individuals are intrinsically motivated when they seek enjoyment, interest, a satisfaction of curiosity, self-expression, or personal challenge in the work" (Amabile, 1997, p. 21). Intrinsic motivation is crucial to achieving creativity. However, in order to enhance creativity, according to Byron and Khazanch (2012), Cerasoli, Nicklin, and Ford, (2014), extrinsic motivators must also be considered – individuals acting due to a reward or recognition may also have a positive impact on creative performance (The importance of expertise is also reflected by the scholars. The term "expert" is used to describe people whose performance is superior to the performance of non-experts in the field and they are identified as a critical element in the creative process (Sternberg, 2006; Kozbelt, Beghetto, & Runco, 2010). Finally, cognitive abilities or brain-based skills are fundamental for the person to be considered creative. Prior knowledge is a significant part of creativity – the creative person needs to have access to his/ her mental library to create new knowledge. Perception, attention, memory, motor skills, language, visual and special processing, and executive functions play a crucial role in the creative process (Kintsch, 1998).

The performance of the creative person is often influenced by the *aspect of the creative environment/ press* i.e. the setting or climate in which the creative process takes place. According to Rhodes (1961), the environment should stimulate creation. Soliman (2005) argues that environmental conditions that have a positive effect on creativity refer to the organizational culture, open and honest internal communication, future orientation, autonomy, resources, and best practices. Clear goals, freedom to experiment, a coach that leads by example can stimulate creativity and innovation. Those who define the

environment as a place, where the creative process takes place (Zhu, 2014; Lewis & Moultrie, 2005), emphasize physical aspects – creative colors, settings, use of natural materials, the complexity of visual details, etc.

The interaction and cohesion between the Person, Process and Press are vital to produce the creative output (Product).

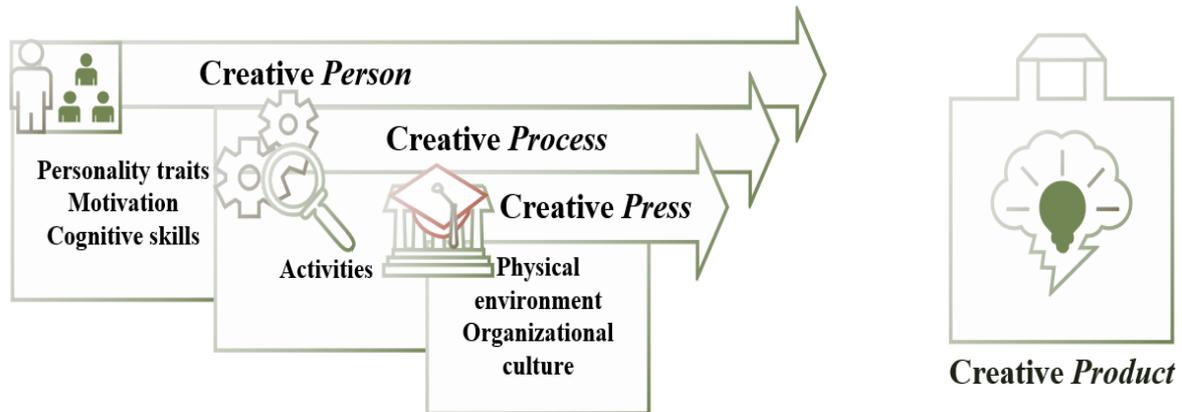


Figure 2 *The four P components of creativity* (Adapted from *An analysis of creativity* (p. 305) by M. Rhodes, 1961, *The Phi Delta Kappan*)

There are many different ways, methods, tools, and techniques to combine the three clusters in order to get the creative result. To get a group into creative thinking mode, help students to find new perspectives, boost innovation but at the same time promote a safe, non-judgmental atmosphere, the Creative Platform didactic model is used at the Vilnius kolegija/ University of Applied Sciences, Faculty of Business Management. This study is a part of longitudinal research, started in 2016 by Mačerauskienė and Turčinskaitė-Balčiūnienė (2017). The methodology is meant to develop creativity during regular practical tasks to make it an involuntary reflex and to discover new viewpoints, perspectives and solutions to any business problem (Byrge & Hansen, 2014). The paradigm of the Creative Platform is based on four pillars: No-Judgement, Task-Focused, Parallel Thinking, and Horizontal Thinking. We are used to judging others – how they act and behave and situations on a personal level. According to the research (Byrge & Hansen, 2008), both, the positive and the negative judgement is typically more harmful than beneficial, especially when it comes to the creative process. *No-Judgement* pillar is meant to avoid both the positive judgement and the negative judgement. During the idea generation sessions, students are instructed and trained not to use neither verbal nor expressed by facial or other non-verbal signals judgement and to avoid self-judgment. None of the participants are asked to perform in front of others and no one monitors the process – there are only the participants and the facilitator in the room. The setting where the creative process takes place is on one hand full

of visual details but on the other hand, does not contain any personal items (coats, bags, etc.), items that produce smell (coffee, food, etc.) and other unnecessary things. To stay focused on the creative process rather than someone the participant expects to generate the biggest number of ideas or find the most innovative solution as the person has an impressive educational background or work experience, participants are not allowed to introduce to each other. Byrge, Hansen (2008) claim, that the No-Judgement pillar allows participants to be themselves in their performance rather than present how they think they are or how they would like others to think about them.

Students during the creative process might get easily distracted by many factors. *Task-Focused* pillar requires 100% concentration on the task. Therefore, the facilitator of the creative process should choose a problem/ challenge or the level of a problem that suits the students participating in the idea generation session best. The participants should be encouraged to use any kind of knowledge they have to solve the problem in a creative way regardless of their social status, cultural background, age, gender, religion or other diversity factors. To fully engage them in the process the facilitator collects the participants' mobile phones, computers, watches, and other potential disturbances. Staying focused on the task the students track of time and find the process of developing new ideas "funny".

*Parallel Thinking* pillar requires "to focus the thinking of both the individual and all the participants in a group towards one task at a time" (Byrge, Hansen, 2008). Every task or instruction in the creative process is divided into smaller tasks or subtasks. In an ordinary class, a lecturer gives a whole task, e.g. Develop as many ideas as possible for the future bus using "person" stimuli cards. On the Creative Platform, the process is highly structured so the facilitator instructs on how to do and what to do at a given time e.g. 1. Stand up (the second subtask is given after the first is completed); 2. Find a partner who was born in the same month as yourself (the facilitator hands out the "person" training cards and asks not to turn them over); 3. Face your partner; 4. Use a new person analogy every time you have to develop a new idea for a future bus (short demonstration takes place); 5. The one with longer hair starts; 6. Please start now; 7. Please stop now. This is how the pillar of Parallel Thinking creates a concentration of the participants.

Diversified knowledge or *Horizontal Thinking* pillar ensures using an indirect and creative approach to solve a problem. Being on the Creative Platform students are instructed to look at a situation or problem from different perspectives. In order to solve the introduced challenge, the participants are asked to think as a bus driver, detectives, archeologists, or programmers. "Picture", "Challenge", "Word", "Up side down" and other training cards are given to break away from a traditional mode of thinking.

A course based on the Creative Platform is divided into six phases: Preparation, the Red carpet, Presenting the problem, Idea development, Professional input, and the Blue carpet (see fig. 3).

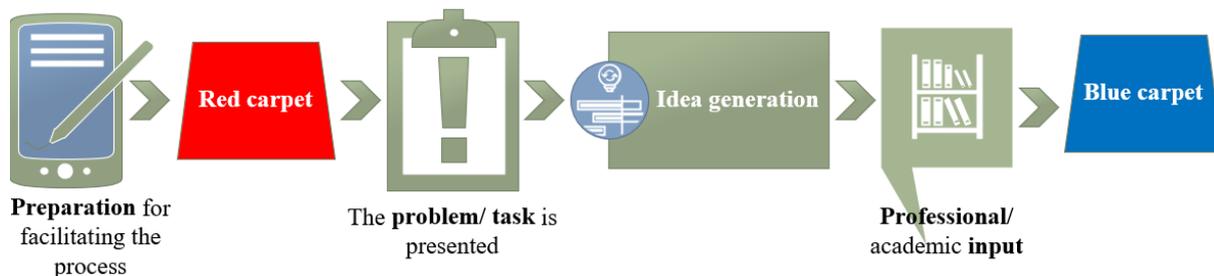


Figure 3 *The 6-phase Creative Platform model*

*Preparation* for facilitating the creative process includes gathering a group of participants who possess different knowledge and expertise, organization of physical environment (arrangement of chairs and working space, materials and supplies, etc.) and putting down a minute to minute program of the creative process. *The Red carpet* ritual is used to get the participants onto The Creative Platform. They are introduced to a different organizational culture guided by the principles of No-Judgment, Task-Focused, Parallel Thinking, and Horizontal Thinking. Performing a number of physical and cognitive tasks students boost their motivation, concentration, and confidence to accept the rules of the facilitator and actively participate in the creative process. *The problem/ challenge* is presented briefly without any academic input in order not to block the participants' creativity. The problem should be clear and concise – it is important to convey all the needed information but not to elaborate on it. *The idea development* process might last from 1.5 to 12 hours or even more. The main goal is to develop unique and original ideas by showing fluency i.e. by developing as many as possible. After performing a variety of exercises the shift in vertical thinking to creative thinking appears. The principles of No-Judgment, Task-Focused, Parallel Thinking and Horizontal Thinking actively cultivated in the process lead to the experience of being creative. After the idea generation session, the *professional or academic input* is brought into the creative process. The participants work on the idea that they want to develop further. The required knowledge is provided by engaging new participants – students from different courses, professors, social partners, etc. to the process. All the participants work under the same rules and principals on the Creative Platform. The last – the Blue carpet phase – is like an exit, process of getting off of the Creative Platform. The students are usually asked to present their ideas to other participants or third parties but are not judged. Only after the completion of the 6 phase model

students are allowed to socialize in a usual manner. By doing that they are back to the “real world” where the Creative Platform principles, including No-Judgment principle, are forgotten.

The article reviews the outcome – a rich range of creative solutions developed by diverse teams on the Creative Platform applied in different courses.

### **Methodology**

The participants in this study were 85 students (age range 19 – 28), 38 male and 47 female, studying at higher education institutions in Bordeaux (France), Vienna (Austria), and Ho Chi Minh City (Vietnam). The first group of students (studying in Bordeaux) was the most international group. The Marketing group of 39 students (Bachelor level) represented 14 different nationalities (Lithuania, the Netherlands, Estonia, Romania, Greece, China, Georgia, Belgium, Poland, Germany, the UK, Spain, Portugal, and India). Regarding the participants studying Project management and IT (Bachelor level) at the higher education institutions in Vienna, 12 of them were born in Austria. The other students (16) were born outside Austria and were either full time foreign students (11) or part time students under the Erasmus program (5). Full time students were from Russia (3), Germany (1), India (4), Sri Lanka (1), China (2). Part time students came from Denmark (1), Poland (1), Check Republic (2), Slovenia (1). The Vietnamese group was an interdisciplinary group of 18 students at a Bachelor level as the main criteria of selection to attend the idea generation session was sufficient English language proficiency to participate effectively.

During the idea generation session at a certain point, all the participants were divided into smaller 3 or 4-student groups. Diverse groups of students (gender, cultural, educational background) were formed to promote a variety of different perspectives. None of the participating groups had the experience working together before. Furthermore, 12 lecturers joined the Vietnamese students in phase 5 (academic input) and helped students to add more ideas using their own mental libraries – experiences and knowledge in different business fields. Only two lecturers joined the groups in Bordeaux and three lecturers shared their ideas in Vienna. See table 1 for more detailed information.

*Table 1 Sample*

<b>Time and venue</b>	<b>Countries participants come from</b>	<b>Educational background</b>	<b>Groups (No of group members, gender)</b>
20-24, March, 2017, Bordeaux, France	Lithuania (2), the Netherlands (3), Estonia (1), Romania (1), Greece (2), China (5), Georgia (2), Belgium (3), Poland (1), Germany (3), the UK (6), Spain (4), Portugal (4), India (2). <b>Total no: 39</b>	3 <sup>rd</sup> year Bachelor students in marketing field.	1.1. (4 – 2M, 2F) 1.2. (4 – 4M) 1.3. (4 – 3M, 1F) 1.4. (4 – 2M, 2F) 1.5. (4 – 1M, 3F) 1.6. (4 – 4F) 1.7. (4 – 1M, 3F) 1.8. (4 – 4F) 1.9. (4 – 2M, 2F) 1.10. (3 – 3F)
16-20, April, 2018, Vienna, Austria	Austria (12), Russia (3), Germany (1), India (4), China (2), Sri Lanka (1), Denmark (1), Poland (1), Check Republic (2), Slovenia (1). <b>Total no: 28</b>	2 <sup>nd</sup> year Bachelor students in Project Management and IT.	2.1. (4 – 2M, 2F) 2.2. (4 – 2M, 2F) 2.3. (4 – 3M, 1F) 2.4. (4 – 3M, 1F) 2.5. (4 – 1M, 3F) 2.6. (4 – 1M, 3F) 2.7. (4 – 4M)
18-22, March, 2019, Ho Chi Minh, Vietnam	Vietnam (18) <b>Total no: 18</b>	1 <sup>st</sup> -3 <sup>rd</sup> year Bachelor students in Psychology, Marketing, Agricultural Business Management, and Entrepreneurship and Management.	3.1. (4 – 2M, 2F) 3.2. (4 – 4F) 3.3. (4 – 1M, 3F) 3.4. (3 – 2M, 1F) 3.5. (3 – 2M, 1F)

*Note. Data about the participant gathered after the idea generation sessions in France, Austria and Vietnam*

The three idea generation sessions were organized and facilitated by the author of the article. The Creative Platform methodology that is often applied at the author's home institution in business field studies was brought to Bordeaux in March 2017, Vienna – April 2018, and Ho Chi Minh – March 2019. The facilitator organized 8-hour idea generation sessions under the Creative Platform methodology as an introductory activity to the course. Some theories of individual and organizational creativity, as well as other methods to boost one's creative potential, were provided during the rest of the stay at the hosting institution. The challenge presented to all groups was the same – to develop a future bicycle. Each group was introduced to the principles of No-Judgment, Task-Focused, Parallel Thinking, and Horizontal Thinking, mode of work and performed four exercises (Clap, Exchange presents, The day backwards, Filling

in the categories) to get on the Creative Platform. To experience idea flow in different categories a number of different stimuli were provided (see fig. 4).



## Future Bicycle

Write down ALL ideas  
Each idea on a separate paper  
Individually in silence



If a **story teller** was hired to solve this problem  
what ideas would he come up with?

Pencil



Aircraft

Apply the principle of “volume”

If a **pianist** was hired to solve this  
problem what ideas would he come up  
with?

The solution must be able **to be shared**



Box

Vending mashine



Apply the principle of  
**various cultures** in the solution



*Figure 4 Some of the stimuli used in the idea generation sessions*

*Note. Compilation of stimuli used in the idea generation sessions (presented in the slides, items pointed at in the room).*

The creative process was divided into idea generation individually, idea generation in pairs, selection of idea individually, idea development in pairs, idea presentation in the class, idea development in groups, selection of idea in groups, idea development in groups 2, preparation for presentation, presentation in the class 2, reflection on idea generation session. The set of various tasks to develop students’ fluency (ability to generate lots of ideas), flexibility (ability to create different categories of ideas), elaboration (ability to add more details and perspectives to existing idea), and originality (ability to come up with ideas that are unique) was presented in different stages. All the ideas generated and the final 22 ideas were collected and analyzed. Besides the facilitator two more experts (lecturers at the hosting institutions) were invited to evaluate students’ ideas according to the following criteria: product originality, elaboration (how

detailed the idea was), and product's adaptiveness (its ability to solve the existing problem). The aspects of the creative person, creative process, creative press, and creative product were taken into consideration during the reflection.

### **Research results**

A culture of creative thinking in business studies was quite well developed at the hosted institution in Vienna – creativity methods were practiced during organizational behavior classes. Unfortunately, creativity was not taught as a separate subject at the hosted institutions and was not a part of curricula at Erasmus students' home institutions. On the other hand, some methods/elements of creativity were introduced in business related subjects such as marketing, project management, entrepreneurship and others at the higher education institution in Bordeaux. Students at the hosted institution in Vietnam were not used to creativity topic and demonstrated a low level of knowledge in creativity methods. Nevertheless, they demonstrated high motivation and good results regarding the ideas.

The future bicycles were presented by 22 diverse groups of students. One idea was selected from the bulk of ideas by each group and developed further in order to launch a future bicycle. The total number of ideas varied from 134 to 201 per group of four students and from 78 to 157 ideas per 3-student group. There was a positive relationship between fluency (the number of ideas) and diversity in the group. The highest level of fluency was reached in the most international as well as interdisciplinary groups as the result of integrating knowledge and ways of thinking from two or more cultures/ disciplines to produce new ideas. These were also mixed groups regarding gender aspect (groups 1.1.; 1.4.; 1.7; 1.9.; 2.2.; 2.4.; 3.1.; 3.3.; 3.4.). The analysis of the data collected disclosed that interdisciplinary groups showed the highest flexibility i.e. the number of different cognitive categories (groups 3.1.; 3.3.; 3.4.; 3.5.). The mean number of categories - 6.25 while the highest number is 11. Some of the categories indicated: sport related improvements; advertisement/communication related improvements; technological and technical improvements; additional services related solutions; design related improvements; culture-related solutions; environment friendly solutions; food related solutions, education related solutions, etc. The most original ideas (not detected in other groups) and the ones solving a real problem were generated in groups 1.4.; 2.4.; and 3.3. The ideas were assigned to the categories "education related solution", "culture-related", and "technological and technical improvements". The most detailed ideas (concrete details were added to sketches) were presented in groups 1.3.; 1.7; 1.10.; 2.4.; 2.6.; 3.2.; and 3.3.

During the reflection, students expressed the following opinions regarding the environment (press aspect) created during the idea generation session the creative process itself: “Phones, watches, and coffee collected was a great toll to wake up creativity. Could be used in other classes”; “It was okay to focus on one idea and to generate other ideas using stimulation”; “It was fun to do short exercises to block our minds from daily problems and help to concentrate them only on creativity”; “I liked that I had to work with people that I've never met in person before”; “We shall continue making mistakes!”; “I enjoyed the strictly structured process although got tired!”; “I really enjoyed how the teacher managed the to keep us active for 8 hours”; “Training was a bit too long in my opinion but it was a huge pleasure not to be judged”; “loved freedom of expressing crazy ideas”; “it was more difficult to work after the professors joined the team”; “had fun but productive time”; “I’ve never thought I’ll work on the same problem with someone studying art!” “it was weird not to give any questions during the trainings”.

### **Conclusions**

Although creativity as a skill is more important today than it has ever been before and it is the skill of the future, still it is often related to art and artists, graphic designers, or painters rather than a business.

The structured paradigm of creativity – the Creative Platform – eliminated the barriers between the disciplines, cultures and other domains and allowed students and lecturers to apply knowledge unlimitedly.

Cohesion between the person, process, and press is extremely important to achieve a creative result. Elimination of judgement in the process and provision of different stimuli enhanced had an evident influence on the participants' fluency and flexibility.

Cultural diversity and interdisciplinary knowledge in the groups generated a better result in terms of quantity and quality and should be continuously used to develop the participants' soft skills and to achieve creative and innovative results.

The environment and process impact on the creative product should be analyzed further and compared to the unstructured idea generation session results.

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## ETHNIC IDENTITY AND ETHNIC CULTURE AMONG THE RESIDENTS OF EASTERN LATVIA

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**Abstract.** *Ethnic identity is an important component of a person's personal identity. Many studies indicate that a strong and secure ethnic identity positively correlates with an adequate self-esteem, coping mechanisms, and optimism. In this study the authors intend to analyse the socio-psychological theories of the ethnic group, ethnic identity and the relationship of ethnic identity and ethnic culture. This article reflects findings gained as a result of a comparative analysis of the characteristics of ethnic identity and its connectedness with ethnic culture among the students of Eastern Latvia. The authors identify what is common for the ethnic groups of the region, as well as point to the differences in the perceptions of their ethnic identity and its manifestation among the respondents. Research methodology: The authors developed a methodology that combines quantitative and qualitative methods of processing the results. This article reflects part of the data obtained as a result of conducting inquiry, where respondents were asked to name literary works in which their ethnic character is reflected most vividly, as well as to name traditions that corresponds to their ethnic identity. The results of the study suggest that there is an idea of the ideal ethnic character and its manifestation. The ethnic traditions, mentioned by the respondents who has Latvian as their native language, were associated with nature, cyclical rhythms in nature and religious symbols. As for the respondents who had Russian as their mother tongue, the most significant were such public holidays such as the New Year, as well as traditional religious festivals.*

**Keywords:** *ethnic identity, ethnic culture, ethnic character, Eastern Latvia.*

### Introduction

The focus of current study is the ethnic self-identification of the research participants and its relatedness to ethnic culture among both Latvian and Russian speaking pool students of Eastern Latvia where the students are situated in the multicultural environment. The aim of the research is to analyse the socio-psychological theories of the ethnic group, ethnic identity and the relationship of ethnic identity and ethnic culture as a background for a more detailed exploration of the characteristics of ethnic identity and its connectedness with ethnic culture among the residents of the Eastern Latvia.

The research method employed in this study is the analyses of the data gained in the survey conducted among the University students on how literary works and festivals that best describe their ethnic identity as well as their ethnic character and its manifestation. The authors try to identify the common features that unite ethnic groups of the region and point to the differences in the perceptions of their ethnic identity and their manifestation among respondents. The language spoken is one of the many manifestations of ethnic identity. To obtain a holistic picture, there is a need to a in-depth exploration of other indicators of ethnic identity as well.

As Phinney notes, ethnic identity plays a central role in the psychological functioning of members of ethnic and racial minorities, but research on this topic is fragmented and inconclusive. (Phinney, 1990). The socio-demographic processes that are taking place in Old Europe and the North American continent lead to an increase in the number of interethnic conflicts. On the other hand, the idea that the division of people into ethnic groups may hinder further development of a globalized economy sometimes is reflected in the works of many scientists (Blanton, 2015). Of course, ethnic identity is manifested in the certain requirements set by the ethnic culture. Therefore, in this study, the authors intend to analyse the socio-psychological theories of the ethnic group, ethnic identity and the relationships of ethnic identity with ethnic culture.

On the example of a comparative analysis of the characteristics of ethnic identity and its connection with ethnic culture among the residents of Eastern Latvia, the authors try to identify the common features that unite ethnic groups of the region and point to the differences in the perceptions of their ethnic identity and their manifestation among respondents. The relevance of the study is determined by the fact that changes in the social life associated with geopolitics that can create difficulties in the process of formation of ethnic identity. This case has been described in the literature when people belonging to one social community do not attribute themselves to any other ethnic group. These are residents of neighbouring territories of Belarus and Eastern Lithuania. State borders often changed here. Therefore, the residents in the documents changed their ethnicity depending on the political situation. Today they call themselves local. The residents of Belarus speak Belarusian and Polish. The residents of Lithuania speak Lithuanian and Polish. Nevertheless, they communicate with each other in their own local language, which differs from Belarusian, Polish and Russian.

## **Overview of the Research on Ethnic Identity Studies**

The studies carried out on ethnic identity have a focus on diverse aspects, such as a development of identity in migration (Wright, 2015), contextualization and fluidity of identity (Turner, 2004).

The most concise definition of an ethnos was given by the Russian scientist Gumilyov that is as following: ethnos is an understanding of who we are and who others are (Gumilyov, 1993). This point of view is invisibly present in theories and studies of ethnic identity. Most studies focus on the ethnic identity of a minority group, since, according to Hjort, minority cultural group display less ethnicity than minorities. The studies of ethnic identity begin with one of three starting points: the theory of social identity, according to which the simple membership of a group provides its members with a sense of belonging that promotes self-esteem, intercultural conflict, with a focus on how a minority group relates to a dominant society; identity formation that emphasizes the development and dynamic aspects of ethnic identity (Hjort, 2004). The researchers suggest several stages in the process of a formation of one's ethnic identity. The basis for this is the four-component theory of the development of personal identity by Marcia (Marcia, 1980). These are: identity diffusion, identity foreclosure, and moratorium and identity achievement. Each identity status represents a progress with regard to identity exploration and commitment to the values, beliefs, and goals that contribute to identity.

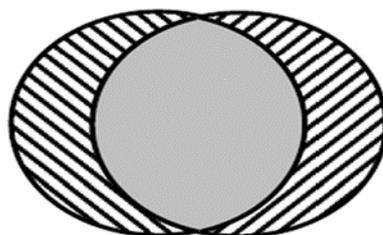
Ethnic identity is defined as a feeling of belonging to an ethnic group, also involving "thinking, perception, and behaviour and determines one's belonging to a group" (Rotheram & Phinney, 1986, p.13). Ethnicity refers to a membership to an objective group, primarily determined by the ethnic origin of parents (Hjort, 2004). Ethnic identity defines the social boundaries and place of a person in the world. However, a social structure does not exist without culture and is filled up with the personal meaning (Gamsakhurdia, 2017). In line with the self-efficacy research, people develop prejudices about their abilities based on age, gender, ethnicity, level of education, and the socio-economic status. The first and most compelling patterns in early childhood development are gained from the parents (Swenson & Prelow, 2005).

### **Ethnicity and culture**

Identity develops in the context of its "ecological niche," which includes family, socioeconomic status, race, ethnicity, and culture (Swenson & Prelow, 2005). Moreover, some researchers believe that there are minimal differences between cultural and ethnic identities (Albert, Schneeweis, & Knobbe, 2005; Berking, 2003).

Cultural identity includes key areas of personal identity: ideology (beliefs and values), ability to love (personal relationships), professional choice and attitude to work (Jensen, Arnett, & McKenzie, 2011). The interconnectedness between culture and ethnic identity is described by Phinney and Ong: “*Ethnic identity derives from a sense of peoplehood within a group, a culture, and a particular setting*” (Phinney & Ong, 2007, p. 271). Ethnic identity stems from a sense of nationality within a group, culture, and a specific environment.

This can be assumed that ethnic and cultural identities are interrelated as depicted in Figure 1.



*Figure 1 Schematic representation of the interrelatedness of ethnic and cultural identity*

In the figure, ethnic identity is depicted by the left oval, and cultural identity by the right. There is much in common between them (gray zone), but there are also differences (shaded zones). It can be assumed that the common elements for these identities are the language and values of their ethnic culture. The hatched right area is the language and values of other ethnic cultures that have been acquired in the process of globalization. Due to this, the influence of the cultural component on the social behaviour of the individual is enhanced. This means that two or more cultures can be incorporated into one’s personality in different ways, depending on the individual preferences and status or strength of different cultures that is in question. Cultural identities undertake a wide variety of forms as influenced by the global world (Jensen, Arnett, & McKenzie, 2011). The language is a key element in the system of cultural identity with its communicative, symbolic and social functions. Therefore, the changes in language resulting from globalization and can affect the development of a person’s cultural identity (Jensen, Arnett, & McKenzie, 2011).

The process of changes of the cultural component of ethnic identity occurs as a result of the assimilation by the ethnic minority of the state (official) language of the country of residence. This process is called acculturation. Cuellar, Harris, & Jasso’s study on a cultural adaptation of Mexicans in the USA, allows one to conclude that acculturation includes five stages: *Very Mexican, Mexican-Oriented Bicultural, True Bicultural, Anglo-Oriented Bicultural, and Very Anglicized*. Moreover, the first generation of immigrants

experiences the greatest difficulties with the acculturation (Cuellar, Harris, & Jasso, 1980). To summarize the above said: there are two cultures: A and B. B is the culture of the country (it includes the language appropriate to this culture. A is the culture of the immigrant. The acculturation process in this case can be represented as such a sequence. The unconditional dominance of culture A. The dominance of culture A with the adoption of culture B. The situation of biculturalism and bilingualism. The dominance of culture B with the preservation of culture A. Culture B replaces culture A. The process of acculturation is associated with differences in cultures and phenotypic traits of their representatives.

As Sodowsky and Plake indicate, Africans, Asians, and South Americans in the United States are less acculturated than Europeans (Sodowsky & Plake 1992). But, what is the content of the shaded area of ethnic identity? Researchers are looking for an answer to this question. For example, an ethnographic study in the Czech Republic revealed large differences between parents who grew up in the socialist Czech Republic and their adult children, who grew up mainly in the era of globalization (Nash, 2005). Both of them did not cease to be Czechs.

Perhaps this is the mental programming centre, about which Segers wrote (Segers, 2008). The centre of mental programming is preserved in those cases when people of the same ethnicity live in different countries and speak different languages. Therefore, sometimes linguistic identity is described within the framework of ethnic identity (Cabrera, 2013).

Globalization creates a new social and cultural reality to which a person needs to adapt. The adaptation process is associated with the revision and restructuring of one's ethnic identity. If this does not happen, fear of losing one's traditional ethnic identity may appear (Samalavičius, 2005). The reorganization of ethnic identity begins with its cultural component. According to Segers, there are three trends related to the content of cultural identity. The first trend is called globalization. In the case of globalization, the ethnic culture is subjugated to a stronger, the dominant one. The author called this process Americanization. The second tendency is localization, or the desire of an ethnic group to preserve its culture. An example is one of the most closed countries in the world - the Democratic People's Republic of Korea.

The third trend is hybridization, or the simultaneous manifestation of both trends. Moreover, the ratio of the first two trends is constantly changing. Sometimes a globalizing tendency prevails over the local one. Sometimes is the opposite. The author calls this trend "*permeable isolation*." An example of this phenomena can be found in a Japanese society (Segers, 2008). Finney suggested that members of an ethnic minority may have strong or weak

identities with both cultures. Accordingly, four types for ethnic identity can be considered:

- integrated (strong identification with both the basic culture and its ethnic group);
- assimilated (strong identification with the basic culture, weak - with its own);
- isolated (weak identification with the basic culture, strong - with its own);
- marginal (poor identification with both basic and ethnic cultures) (Berry 1980).

### **Research Methodology**

The authors have developed a research methodology for the study the relationship of ethnic identity and culture. Respondents were asked to name ethnic traditions, as well as literary works in which ethnic identity is most clearly manifested. Before answering the questions, each respondent provided the following information about himself/herself: father's nationality, mother's nationality, mother tongue, the knowledge of other languages, gender, age, and religious affiliation. Fifty-four respondents took part in this study. The entire sample was divided into 2 subgroups according to the language principle. The group of respondents with native Latvian language included 27 people. A group of respondents with the Russian as native language also comprised 27 people. The tables below depict the results of the study. The respondents of both groups are from the Latgale region comprising the age group from 18-59.

Research method is sufficient to explore ethnic identity since it reveals a small part from the whole design to study the ethnic identity.

### **Research Findings**

The authors have explored the choice of literary works in which the ethnic character is the most clearly depicted by the group of respondents with Latvian as their native language).

In the section "reference of all works" in Table 1, the number of works that were mentioned, and not the total number of respondents who made a reference to these works.

**Table 1 The choice of literary works in which the ethnic character is most clearly depicted (a group of respondents with the Latvian as their native language)**

The total number of references to all works	The title of literary work	The number of references	References from another language group	Number of references
18	A. Pumpurs. Lāčplēsis Bearslayer	6	Dostoevsky: Crime and Punishment	1
-	R. Blaumanis Purva bridējs In a quagmire	2	Tolstoy: War and Peace	1
-	J. Rainis Pūt, vējiņi! Blow, wind!	2	-	-
-	Brāļi Kaudzīši Mērnieku laiki Surveyors' times	2	-	-
-	A. Brigadere Sprīdītis Spriditis	2	-	-
-	A. Grīns Dvēseļu putenis The blizzard of souls	2	-	-

Table 2 reflects the choice of literary works in which the ethnic character is the most clearly described by the group of respondents with the Russian as native language.

**Table 2 The choice of literary works in which the ethnic character is the most clearly described (a group of respondents with the Russian as native language)**

The total number of references to all works	The name of literary work	The number of references	Literary works from another language group	Number of references
33	Tolstoy "War and Peace"	4	J. Rainis Golden Horse	1
-	Dostoevsky' s works	4	A. Grīns The Blizzard of the Souls.	1
-	Pushkin "The Tale of the Fisherman and the Fish"	2	Brāļi Kaudzīši Surveyors' times	1
-	-	-	Anna Brigadere Spriditis	1
-	-	-	Andrejs Pumpurs Bearslayer	1
-	-	-	Imants Ziedonis The fairy tales of colour	1

In the first and second case, the authors reflected in the tables only those works that received two or more choices made by the respondents. This requirement did not apply to literary works from another language group. The data gained in this study indicate that that in the group of respondents with their

Russian as native language, more literary works were mentioned that reflected the ethnic character as compared to the group of respondents with the Latvian as native language (33 versus 18). At the same time, all works that were mentioned in both groups belong to the classics or were written until the 90s of the last century. Not a single contemporary work has been mentioned. At the same time, respondents with the Latvian language as their native language have mentioned a greater number of traditions related to their ethnic mentality, than the respondents with a the Russian as their native language (35 versus 25).

The analyses of the obtained data received from the respondents with the Latvian as their native language allows concluding the following. Their answer to a question about a literary work, where the ethnic character is manifested, is dominated by the epic of Anrejs Pumpurs "Lačplēsis" (Pumpurs, 1988). As reflected by Lams, this symbol of ethnic identity was mostly manifested in this ethnic group (Lāms, 1993). In the mythology of various nations, a special place belongs to the myth of a hero, which has certain positive qualities and which needs to pass a series of tests in which these qualities are tested (Rank, 1997).

The mythological ideas from the Latvian literature about the hero are manifested in the image of Lāčplēsis. He is strong and wise, fighting the Absolute Evil (Black Knight), and is endlessly devoted to his people. The image of the hero in the Latvian epic is complemented by a female image - Laimdota. Laimdota is an ideal of a female ethnic character. She is smart, beautiful, kind-hearted, feminine, faithful to Lāčplēsis and her people. Laimdota personifies the image of Latvia. This symbol of the Motherland - a woman is subsequently transformed by Rainis into the image of Baiba in the work "Breeze the Wind" ("Pūt vējiņi") (Makarevičs, 2017). The works of Rūdolfs Blaumanis, Brāļi Kaudzīši, Anna Brigadere, and Aleksandrs Green were also mentioned in the students' responses. In these works, both, male and female ethnic characters are specified, the ideal of which is reflected in the images of Lačplēsis and Laimdota.

The other work widely mentioned in students' responses was Blaumaņa "Purva bridējs." There are two main characters in this work: Edgars and Christina. The author depicts Edgar as a passionate but noble, corrupted but good. Christina is depicted as a good character. She is hardworking, beautiful and could be a good wife in every sense (Blaumanis, 1994). The other work that was mentioned by the students are Brāļi Kaudzīši: "Mērnīeku laiki." Here, the archetypal idea of the Motherland as a woman that contrasts masculine who is hiding under the nickname and characterizes these characters with words, jokes, jokes, and a laughter. From the beginning, Kencis leaves the impression of a very funny person. The female image of Tenis's wife, Ilze, is positive. She is hardworking, caring, intelligent, life wise, strong-willed, sensitive "Mērnīeku laiki" (Kaudzītes, R., & Kaudzītes, M., 2014). The male character Kencis is full

of humour, self-criticism and wisdom. In Vidzeme, the ethnographic part of Latvia, where the authors of this literary work were born, Kencis often comes to the weddings and parties at the midnight. Perhaps the choice of this work by the respondents can be explained by this fact.

A. Green's work: "*Blizzard of the Souls*" reflects the image of the hero at the crucial moments in the history of the nation (Zaļais, 2016). The respondents recalled this work because it was recently displayed in the screens of movie theatres. Anna's Brigadere's work: "Sprīdītis" reflects the unity with nature, an understanding of natural forces, and our own wisdom that helps one to cope with life's problems and helps to achieve one's goal (Brigadere, 1998). The genre of this work is a fairy tale. It should be mentioned that the folk tales that reflect ethnic characteristics were also mentioned by the respondents from both ethnic groups: the one with the Latvian as a native language and in the group with the Russian as a native language. In this regard, it would be interesting to trace ethnic ties represented in fairy tales and in literary works.

The results obtained, the character Kencis who preserved the perception of the world as a naive child, to some extent is comparable with the image of Sprīdītis.

In the Russian speaking group of respondents, the works of Dostoevsky "*Crime and Punishment*" and Tolstoy's work "*War and Peace*" were mentioned more frequently. In these works, among the leading characters there were no representatives from the Latvian ethnic group. This is most likely that this respondent has graduated a school with the Russian language of instruction, where the main focus was placed on the study of the Russian language and literature.

The group of respondents with the Russian as their native language has named 33 works in which, to their opinion, the Russian ethnic character is manifested more vividly. These are the works of Tolstoy, Dostoevsky, and Pushkin. In Tolstoy's work "*War and Peace*" there are about 600 characters. The analysis of the ethnic characteristics of the character of each of them is an inextricable job. Therefore, the authors pay attention to the already mentioned works, in which the most general analysis of the Russian ethnic character is depicted.

One of these works is the article "*Russian national character in the work of Leo Tolstoy: 'War and Peace.'*" The Russian character manifests itself in heroes in contact with nature, music. In his works Tolstoy shows two descriptors of the Russian character: militant and peaceful. Tolstoy does not idealize these two principles. He believes that in a human being has both, militant and a peaceful beginning. As for the female characters, Tolstoy's women and their actions rely more on emotions than on reason (Russkij nacional'nyj harakter ..., 2019).

The given examples indicate that the ethnic character has an ideal form and many real options for his/her embodiment. In addition, this is necessary to distinguish between male and female ethnic characters. One finds several manifestations of Russian ethnic character in other literary works mentioned by the respondents. For example, the analysis of Dostoevsky's works shows that the Russian person is characterized by an indestructible thirst for truth and justice - by all means, even by making a sacrifice in the name of this sacrifice. In addition, the Russians are capable of a great feat, manifestation of selflessness and fortitude. If necessary, in exceptional cases, they are able to be united. The highest value for Dostoevsky in the Russian ethnic character was faith and suffering (Holondovich, 2015).

Pushkin's "*Tale of the Fisherman and the Fish*" (Pushkin, 1960) is another example of vivid ethnic features. One's hope for a miracle and hope that without any special efforts one can achieve the desired results. Pushkin's fairy tale continues the trend of Russian folk tales, where, for example, the character's desire is fulfilled by a pike, and precedes the appearance of Goncharov's work "*Oblomov*" (Goncharov, A., 1915). This work was mentioned by one of the respondent of a group with the Russian as a native language and serves as a vivid example of an ethnic character.

Table 3 summarizes the results of the study on ethnic traditions in which the ethnic identity of national groups is the most vividly manifested.

**Table 3 The choice of folk traditions in which the ethnic character is the most clearly manifested (a group of respondents with the Latvian as a native language)**

The total number of references to all ethnic traditions	National traditions	Number of references	Tradition of other ethnic group	Number of references
35	Midsummer celebration	14	Масленица (Maslenica)	1
-	John's day (Midsummer celebration)	14	-	-
-	Song festival	9	-	-
-	Metēņi	7	-	-
-	Mārtiņi	6	-	-
-	Christmas	6	-	-
-	Miķeli	6	-	-
-	Celebration of Feasts	4	-	-

In this case, we limit ourselves to the number of references equal to four, guided by the fact that the size of the scientific article has limitations. The group of respondents with the Russian as a native language is dominated by the secular traditions - the celebration of the New Year, and religious feasts - Christmas and Easter. At the same time, the traditions mentioned by the ethnic Latvians,

reaches 27 references of the total number of references to literary works. This may indicate that there is a slow process of integration of both ethnic cultures. Among the traditions characteristic to the Russian ethnic group, the respondents referred to a number of crafts: patterned weaving, art sewing, metal forging, jewellery and wood carving.

*Table 4 The choice of folk traditions in which the ethnic character is the most clearly manifested (a group of respondents with the Russian as native language)*

The total number of references to all ethnic traditions	Tradition	The number of references	Tradition celebrated by the other ethnic group	Number of references
25	New Year	6	Metēņi	1
-	Christmas	5	Mārtiņi	1
-	Easter	5	Life cycle celebrations	1
-	Масленица (Maslenitsa)	3	Latvian folk festivals	1
-	Иван Купала (Ivan Kupala)	3	State holidays	1
-	Midsummer celebration	3	-	-

In this sample, the number of respondents' choices was reduced to three, since the previous criterion for this case did not reflect the completeness of the picture.

### **Conclusions**

The main conclusion that the authors may draw from the results of this study are as following: there is an ideal image of an ethnic character and many options for its embodiment in real life situations. At the same time, one must bear in mind that the ideal ethnic character has two components - masculine and feminine.

This is curious that respondents who simultaneously referred to both Latvian and Russian as their mother tongue (they were from the mixed families, three respondents in total) answered questions about literature and ethnic traditions, either as: "I don't know" or "I don't know which ethnic group I belong to".

The mentality of the respondents belonging to the group where Latvian was a native language is associated with processes in the nature. This is another confirmation that the ethnicity of the Latvian people is associated with the natural life cycle. Among the dominant traditions, they have mentioned the song and dance festival. The soul of Latvian people manifests itself in this way. The group of respondents with the Russian as their native language depict that the

Russian character manifests itself in heroes in contact with nature, music. The Russian character is militant and peaceful. According to Tolstoy a human being has both, militant and a peaceful beginning. As for the female characters, Tolstoy's women and their actions rely more on emotions than on reason (Russkij nacional'nyj harakter ..., 2019).

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## HIGHER SCHOOL TEACHERS' DIGITAL COMPETENCE: STRATEGIES FOR SELF- ASSESSMENT AND IMPROVEMENT

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**Abstract.** *The paper was aimed at examining higher school teachers' strategies for self-assessing and improving digital competence and finding out the range of the most effective and innovative ones. The research sample consisted of 115 higher school teachers from four higher educational establishments in Ukraine. The research sample was selected with the use of a non-random sampling technique. Personal data of research sample were taken into consideration i.e. demography, gender balance, age and specialty. The research strategy for collecting empirical data combined a web-based questionnaire, individual interviews, conversations with respondents and analysis of reflexive texts. The collected empirical data were then analyzed both quantitatively and qualitatively. The data were processed by means of Microsoft Excel 2016 and verified by Chronbach' Alfa (An Index of Reliability). During the development of a web-based questionnaire the authors defined seven cognitive content-components of higher school teachers' digital competence and each of them was given a synthetic index. The obtained findings showed that higher school teachers had different levels of digital competence: ranging from low to high, and revealed the diversity in peculiarities of its manifestations and ways of thinking when operating the competence mentioned. The research results served as the basis for offering innovative strategies for self-assessing and improving higher school teachers' digital competence.*

**Keywords:** *cognitive content-component, digital competence, higher educational establishment, higher school teachers, strategies for self-assessing and improving digital competence.*

## **Introduction**

Technological advances that are an indispensable part of human life and affect every aspect of today's society continue changing requirements concerning personal and professional skills of experts in various fields. To positively contribute to world community and community you live in and to try to achieve considerable success, it is not enough to be just clever. In order to live a fulfilling life anyone should possess "a wide range of skills and competences and to develop them continually throughout life" (European Commission, 2018, p. 1). And although all competences are considered to be equally important, digital one offers infinite opportunities for improving formal, non-formal and informal learning, for shaping learning experience of different groups of learners and students, for providing educational information etc. Involving "the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society" (European Commission, 2018, p. 4), digital competence provides individuals with the possibility to achieve their full potential as effective agents of positive social change and highly qualified professionals and, what is more important, to participate fully in all aspects of life (Vuorikari, R., Punie, Y., Carretero Gomez, S., & Van den Brande, G., 2016).

The advanced level of digital competence enhances experts' employability and improves their capacities through skills development and participation in professional learning networks by means of various information technologies and the Internet. And higher school teachers are not an exception. Providing formal, non-formal and informal learning, digital competence promotes higher school teachers' professional growth and development of their self-efficacy (Malykhin & Aristova, 2018). In a today's world higher school teachers should be the agents of changes and play a key role in changing students' educational practices (Malykhin, 2016).

## **Purpose and Tasks of Research**

The main objective of the paper is to examine higher school teachers' strategies for self-assessing and improving digital competence and to find out the range of the most effective and innovative ones.

The achievement of the main objective implies completing the following assignments:

- 1) to reveal the essence of existing higher school teachers' strategies for self-assessing and improving digital competence;
- 2) to define an innovative cognitive content-components structure of higher school teachers' digital competence and to give a synthetic index to all of them;

- 3) to provide some practical guidance as for choosing methods and means for determining higher school teachers' digital competence level.

## Research Methodology

### *General Characteristics of Research*

The team of five researchers carried out the research from November to March, academic year 2018/2019. The research took place at four Ukrainian university, namely, Oleksandr Dovzhenko Hlukhiv National Pedagogical University (Hlukhiv, Ukraine), Kamyanets-Podilsky Ivan Ohienko National University (Kamyanets-Podilsk, Ukraine), National University of Life and Environmental Sciences of Ukraine (Kyiv, Ukraine) and Interregional Academy of Personnel Management (Kyiv, Ukraine).

### *Research Sample*

The non-random sampling technique was used to select the research sample. The research sample included 115 higher school teachers. Personal data of research sample were taken into consideration i.e. demography, gender balance, age and specialty.

The demographic distribution of research sample is given in Table 1.

*Table 1 Sample demographics*

Variable	Number (N=115)	Percentage (100%)
<b>Gender</b>		
Male	55	47.83%
Female	60	52.17%
<b>Age</b>		
<=30	18	15.65%
31-40	39	33.91%
41-45	28	24.35%
>=46	25	21.74%
No information about age	5	4.35%
<b>Specialty</b>		
Humanities	43	37.39%
Natural Sciences	36	31.30%
Maths and Technologies	26	22.61%
Information technologies	10	8.70%

Source: own study  
N=115

Figure 1 shows the distribution of respondents according to the gender criterion.

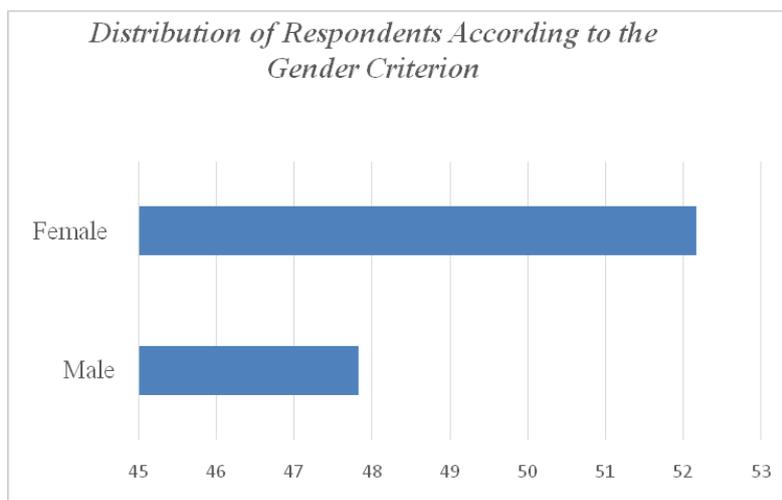


Figure 1 Distribution of respondents according to the gender criterion

The distribution of respondents according to the age criterion is demonstrated in Figure 2.

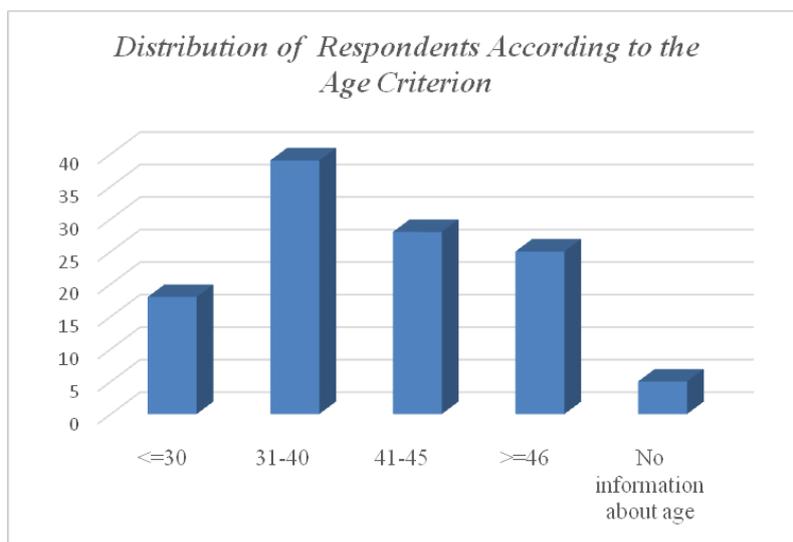


Figure 2 Distribution of respondents according to the age criterion

Figure 3 shows the distribution of respondents according to the specialty criterion.

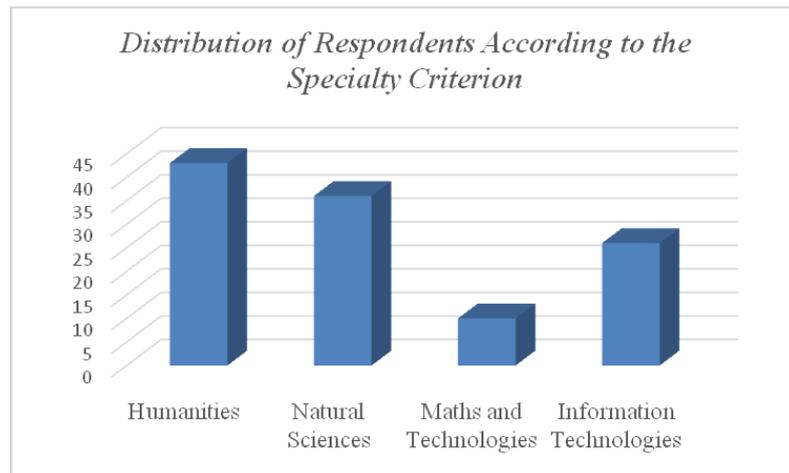


Figure 3 Distribution of respondents according to the specialty criterion

### Research instrument

The research strategy for collecting empirical data combined a web-based questionnaire, individual interviews, conversations with respondents and analysis of reflexive texts. The web-based questionnaire developed by means of Survey Monkey (free online questionnaire tool) included 35 questions. The collected empirical data were then analyzed both quantitatively and qualitatively. The data were processed by means of Microsoft Excel 2016 and verified by Chronbach' Alfa (An Index of Reliability). During the development of a web-based questionnaire the authors defined seven cognitive content-components of higher school teachers' digital competence and each of them was given a synthetic index.

### Results and Discussion

Table 2 demonstrates seven cognitive content-components of higher school teachers' digital competence.

Table 2 Synthetic index to cognitive content-components of higher school teachers' digital competence

Cognitive content-components	Respondents (N)	Chronbach' Alfa	Sv	Sr
Combination of technological and pedagogical knowledge, skills to know what opportunities are provided by different information technologies in instruction process	N=113	0.890	0.911	3.917

Knowledge and skills of using information technologies for creating information content; understanding of what information technologies are the most suitable for teaching definite disciplines	N=105	0.913	0.893	3.873
Technological knowledge, knowledge about information technologies and their development	N=101	0.825	0.810	3.212
Pedagogical knowledge, knowledge about teaching methods and teaching methods implementation through using information technologies	N=107	0.843	0.836	3.720
Content of knowledge which has to be obtained for successful professional activity in information society	N=104	0.837	0.822	3.509
Knowledge on pedagogy, learning and teaching approaches corresponding to definite disciplines and aims and purposes of education	N=102	0.863	0.816	3.516
Technological and pedagogical content of knowledge, intersection of technologies concerning teaching methods and information technologies	N=100	0.827	0.814	3.317
Note: N=number of respondents; Sv=standard deviation; Sr=average mean				

Source: own study  
N=115

The analysis of higher school teachers' digital competence level corresponds with the levels described in "DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use" (Carretero, Vuorikari, & Punie, 2017) and is connected with the main research question how high school teachers assess their own digital competence. The following data contain the results of analysis of four levels of higher school teachers' digital competence, namely, foundation, intermediate, advanced and highly specialized. To make the presentation of material convincing, we quote some passages from explanations given by respondents with different levels of digital competence.

**Foundation level of digital competence.** Some higher school teachers think that their level of digital competence can be regarded as foundation, as they rarely use information technologies. Understanding that, although, students and other higher school teachers use different information technologies they believe that they also have to use them. Unfortunately, higher school teachers whose digital competence level is foundation are only able to search online for

some information, do some simple tasks and use some information technologies to make instruction process more interesting:

*“I have to admit that I am not an accomplished computer user. Everything I can do is to prepare presentations using Power Point. But to prepare them I have to ask for my students’ or my colleagues’ help. Although they are always ready to help and never refuse to help me, I am not comfortable with such a situation as nowadays information technologies are very important and highly required in the educational field”.* (Liudmyla)

The reasons for not using information technologies or for some limitations in using information technologies can be explained by the fact that for some respondents who represent „the older generation of high school teachers” Information technologies do not play an important role in their work taking into account the lack of technical infrastructure, the financial gap and differences in technical opportunities between city education institutions and village ones that were in the past:

*“When I started working 25 years ago we did not have many opportunities to use information technologies at work. We did not have enough computers at the workplace let alone the Internet or other information technologies. To tell the truth, there were computers and the Internet but they were not used for educational purposes. In most cases they were used by administration for managing the educational process. And buying a personal computer was a big deal. I understand that nowadays information technologies are becoming more and more important in all spheres of our lives but I find it very hard to improve the level of my digital competence”.* (Valeriy)

To sum up, we should note that for higher school teachers whose digital competence level is foundation and who prefer to use traditional teaching methods and techniques in instruction process the question on information technologies was not a simple one. However, despite that, they are ready to develop their digital competence either by doing some special courses at work or by attending some classes at special centres.

**Intermediate level of digital competence.** Higher school teachers whose digital competence level is intermediate one are able to understand, investigate and solve some problems connected with some use of information technologies according to their needs. The digital development process which is taking place in the present-day world society is one of the main factors that motivates higher school teachers to keep pace with the times and to use all the possible information technologies in instruction process. It is obvious that to be successful in the digital age anyone has to be digitally competent:

*“To live successfully in the present-day society you have to adapt to various digital technologies. I believe that their use open up new opportunities for self-fulfilment in anyone’s professional and personal lives. The higher level*

*of your digital competence the higher level of competitiveness is ... ”.*  
(Olha)

Many higher school teachers engaged in scientific activities understand that information technologies are becoming more and more relevant and necessary for future:

*“As a teacher you have to know what your students’ interests are. In most cases they are keen on computer applications and new digital gadgets”.*  
(Tetiana)

Thus, the use of information technologies is regarded as something new and beneficial:

*“If you know how to use digital technologies and use them in instruction process you can get a dual benefit. At first, digital technologies provide a unique opportunity to ease teachers’ work: you can search for the necessary information on the Internet and spread it among your students, use forums to communicate with colleagues and students, work with students and give feedback etc. And at second, digital technologies make the lessons interesting and unimitable”.* (Iryna)

Other information technologies that were mentioned by respondents included email, game-based learning platforms, digital libraries, online learning platforms, smart-phones, notebooks etc.

We have to add that higher school teachers whose digital competence level was intermediate often do not understand how to use information technologies for teaching and learning. According to responses given by respondents it can be argued that the lack of understanding is connected, on the one hand, with the necessity to use innovative teaching methods that are also unclear for them, and, on the other hand, is the main reason for respondents’ lack of self-confidence. These respondents explain that without experts’ help it is very difficult to learn how to use information technologies:

*“Before you start using a definite digital technology in instruction process you have to know exactly what to do, otherwise you will look and feel awkward”.* (Svetlana)

Respondents also add that they need more help and knowledge in order to use some information technologies in their everyday activity. Some of them even mention doing some courses aimed at improving their digital competence:

*“I understand that digital technologies open up new opportunities both for students and teachers. But to keep up with technological advances and to be interesting to students you have to be digitally competent. As I am not as proficient as most of my students I am thinking about doing a course that will enable me to use digital technologies effectively to improve student learning”.* (Yuliia)

**Advanced level of digital competence.** At an advanced level where cognitive sphere is used and assessed the higher school teachers are able to solve

different tasks and problems, direct others and adapt to students and colleagues in a complex context. Respondents with an advanced level of digital competence explain that information technologies can be used in order to make instruction process more varied:

*“While learning disciplines I teach, students discover new things all the time as I try to provide them with the most updated information. I think teachers have to track the current progress in their area of expertise and digital technologies help them keep in step with scientific advances”.* (Oleksandr)

Besides, the obtained results show that information technologies are perceived as the support to teaching and learning process but not as its main focus. Higher school teachers with an advanced level of digital competence think that information technologies should serve as a means which motivates students to learn and get in-depth knowledge as well as a go-between students, teachers and knowledge:

*“Being digitally competent teachers have to be able to understand what digital technologies can be used for teaching and learning”.* (Halyna)

To be competent in digital sphere is regarded as something necessary and compulsory in higher school teachers' work. One of respondents mentions:

*“I consider a digital competence as one of the fundamental competences that has to be demonstrated by highly qualified experts specializing in various fields. Nowadays to be digitally competent is as important as to be literate. If you know how to read and write but you do not know how to use a computer and different applications you won't be able to do any job properly. I can even say that you won't be able to survive in a fast growing digital society”.* (Iryna)

**Highly specialised level of digital competence.** While evaluating and creating a cognitive domain, higher school teachers solve complex problems and tasks, make a significant contribution to professional practice and demonstrate a developed awareness of using information technologies in the educational process. The ability to evaluate and apply relevant information technologies in a variety of pedagogical settings is considered as a necessity and opportunity to vary the educational process with the use of multimodality to improve the education process.

Higher school teachers with such a level of digital competence transfer their knowledge by critiquing existing teaching and learning practices and developing new ones. The responses of respondents with a highly specialized level of digital competence are as follows:

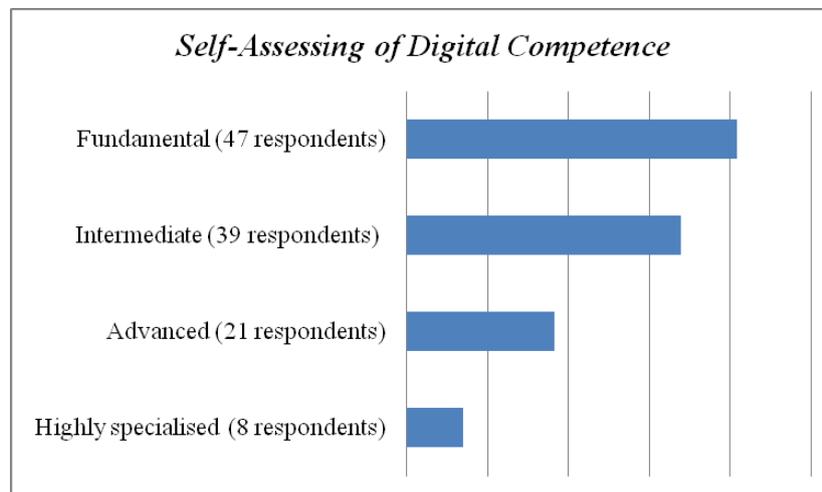
*“Existing information technologies are well integrated with learning goals but this process requires much effort and time in order to create and develop an individualized learning strategy”.* (Maryna)

They know and understand the risks of using information technologies with educational aims. In addition, they see themselves as consultants (supervisors) who are able to help students use various information technologies in their learning process:

*“Information technologies help teachers engage students in more effective ways of learning”*. (Olena)

Having such a level of digital competence higher school teachers are able and ready to experiment with various information technologies and are constantly improving instruction processes. Moreover, they feel comfortable with both information technologies and the stated teaching and learning methods. The obtained results make it possible to claim that all higher school teachers who have a highly specialized level of digital competence share this point of view.

The survey shows a diverse range of results (Fig. 4). As we can see higher school teachers do not form a homogeneous group. Their education and experience in using information technologies are very different. Thus, 8 respondents (6.96%) think that the level of their digital competence is highly specialized, 21 respondents (18.26%) are convinced that the level of digital competence they possess is advanced. In its turn, 39 respondents (33.91%) assess their digital competence level as intermediate and 47 respondents (40.87%) – as fundamental.



*Figure 4 Self-assessing of digital competence by higher school teachers*

*Source: own study*

*N=115*

The obtained findings demonstrate that although currently it is hard to imagine instruction process without using information technologies and all possible digital gadgets, the majority of higher school teachers participating in the research understand that their digital competence should be improved. Even

some respondents who assess their digital competence level as highly specialized deeply believe they should increase their expertise participating in different workshops and doing special courses. But, unfortunately, not all respondents share the same point of view and have a positive attitude towards improving their digital competence. The promotion of motivation and improvement of access to additional education aimed at boosting higher school teachers' digital competence make a meaningful difference in instruction process.

### Conclusion

The paper was aimed at examining higher school teachers' strategies for self-assessing and improving digital competence. For achieving the main objective the team of researchers has revealed the essence of existing higher school teachers' strategies for self-assessing and improving digital competence; has defined an innovative cognitive content-components structure of higher school teachers' digital competence and to give a synthetic index to all of them and has provided some practical guidance as for choosing methods and means for determining higher school teachers' digital competence level. As a result seven cognitive content-components of higher school teachers' digital competence have been defined and each of them was given a synthetic index. The obtained findings have shown that higher school teachers have different levels of digital competence: ranging from fundamental to highly specialised, and have revealed the diversity in peculiarities of its manifestations and ways of thinking when operating the competence mentioned.

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# THE NECESSITY OF BILINGUAL APPROACH IMPLEMENTATION AT HIGHER EDUCATIONAL ESTABLISHMENTS

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**Abstract.** *The article highlights the results of the bilingual approach implementation to the process of preparing students for their professional competencies in the context of higher education system reformation. The topicality of the study is caused by the fact that the entry of Ukrainian society into the European space imposes appropriate requirements for the new generation specialists' training. The purpose of the study was to substantiate theoretically and verify experimentally the implementation of a bilingual approach to learning a foreign language in the process of teaching some professional disciplines in order to improve the professional training of students of non-linguistic specialties. To achieve this goal, we used the following methods: to collect empirical survey data (student questionnaires and interviews with teachers), a statement experiment to find out the real state of the problem under investigation, a search experiment to implement the bilingual approach in the study of foreign language and its control. The experiment was participated by students of the 1<sup>st</sup> and 2<sup>nd</sup> years of study of non-linguistic specialties students at higher educational institutions during four terms, the study was carried out in three stages. At the first stage the level of preparation of the first-year students of non-linguistic specialties was studied. The results demonstrated that more than half of the respondents had difficulties in mastering the material. At the second stage of the study, a search experiment was conducted using a bilingual approach. In the course of the effectiveness approach checking, it was recorded that students demonstrated a sufficient level of foreign language proficiency due to the systematic use of the bilingual approach while studying basic disciplines.*

**Keywords:** *bilingual approach, communicative competence, foreign language, higher educational institution, language of professional orientation, motivation to study.*

## Introduction

In the last decade a change in the quality standards of education at all of its levels is taken place in Ukraine. It is concerned not only to secondary education but also to higher education (About Higher Education: The Law of Ukraine, 2014). The reason of such a process is the Ukrainian society's European integration, which, in its turn, requires the fluency of foreign languages. Since

English is a basic language in any European society, it requires foreign language proficiency. Studying English is becoming relevant throughout the entire period of study, from the stage of studying it at high school, when the student acquires basic knowledge and skills, and continues to improve it at the professional level. However, in Ukraine, the last stage has a number of difficulties that are worth to be taken into consideration and overcoming of which requires immediate solution.

*The aim* of the study is to outline the theoretical basis of the scientific problem and to analyze the results of an empirical study of the bilingual approach effectiveness in teaching at HEI (higher educational institutions) while professional disciplines teaching for non-linguistic specialties.

To achieve the goal, the following *tasks* were set: 1) to reveal the essence of the bilingual approach learning process; 2) to characterize the foreign experience of this approach using; 3) to carry out an empirical verification of the effectiveness of the methodology of applying bilingual approach to raising the level of HEI students' professional communication skills.

### **Methods and fundamentals of research**

*Methodology of research* – analysis, synthesis and review of science-methodical literature for a making comparative analysis of a different points of view on the problem being investigated; observation and questioning for students to find out the motivation in learning a foreign language, for teachers to determine the real state of teaching and mastering a foreign language by students, that is, the respondents were in a subject-subject relationship. Questionnaires were compiled by the authors to analyse the effectiveness of foreign language lessons and to determine the level of foreign language competent proficiency. Conducting searching experiment to determine the effectiveness of the bilingual approach application while teaching disciplines on their specialities at HEI.

*Theoretical framework and methodology.* The problem of foreign language proficiency at the level of fluent professional communication has emerged sharply recently, as the broadening of Ukraine's ties with European countries has led to an foreign investments increase to our country and, consequently, the demand for specialists who have knowledge and skills both in their specialty and speak foreign language fluently. Since the basic knowledge of a foreign language is obtained on the level of secondary education, so, the formation of foreign language competence on professional level is the prerogative of the HEI. The formation of a future specialist's foreign language professional competence enables him to be competitive in the labor market. The problem of teaching a foreign language as a component of multicultural

communicative competence was the subject study of a number of Ukrainian researchers, in particular, in its psychological content (Balashov, Pasichnyk, & Kalamazh, 2018; Spivak & Kovalenko, 2018 and oths.), as well as pedagogical (Bihych, Borysko, & Boretska, 2013; Borysova, 2016; Nikolaieva, 2013, 2015; Tarnopolskyi, 2010 and oths.). Among foreign authors, the search for the best ways to master the language was the subject of research of the following scientists as D. Brinton, M. Snow & M. Wesche (1989); Y. Kyuchukov, O. Ushakova & V. Yashina (2018) and oths. However, the peculiarities of bilingual approach implementation in the process of foreign languages study by students of non-linguistic specialties were not detailed there.

Thus, the scientific hypothesis of our study is that in order to achieve foreign language proficiency it is necessary to introduce a bilingual approach to the process of professional disciplines study at HEI.

### Results of theoretical research

**Substantiation of the use of the bilingual approach in the study of a foreign language.** Bilingual education involves studying academic disciplines in two languages – native and foreign (Baker, 2011; Cohen, 1975; Gonzalez, 2015; Granados-Beltran, 2013; Kouega, 2008; Malarz, 1998; Pavon & Gaustad, 2013; Porter, 1990 and oths.). In the XXI century, one-language professional communication insufficient for economic, social and educational progress. Modernization of society requires the several languages profficiency. Bilingual education is a peculiar system in which students with a low level of foreign language knowledge study subjects in both their mother tongue and foreign language. The generally accepted definition of bilingual education is “the use of two languages as a means of teaching a child or a group of children in part or all subjects according to the curriculum” (Cohen, 1975, 199).

Thus, in Cambridge, bilingual education is presented as follows (see diagram in Figure 1):

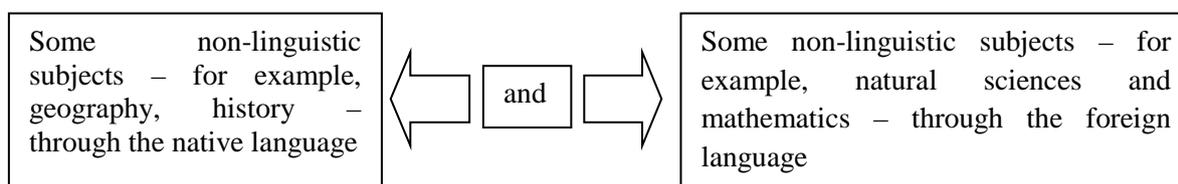


Figure 1 The structure of bilingual education at Cambridge (Cambridge, 2017, p.1)

And, as an alternative, the student has the opportunity to study the same subject in two languages (Cambridge, 2017, p.1). This approach is relevant in many European countries where English is not a national language, but demand

in the labor market requires knowledge of English. European HEI practice this approach, motivating its application by the following criteria:

- cognition (divergent and creative thought development);
- foreign language proficiency on the level of certain specialty;
- literacy;
- knowledge gained in the native language can be freely transformed into different spheres of life (Malarz, 1998).

The outlined criteria are extremely relevant and important for young people in education in Ukraine.

Hence, we outline the *working hypothesis of our study*: the study of subjects applying the bilingual approach method will provide the opportunity for future specialists' foreign language further speech competence development; will focus on the subject itself and will increase the motivation to study it.

*The results of the comparative analysis* gave reasons for outlining such a generalization: on the basis of the handling of international experience materials, it was discovered that students who studied subjects on the basis of the bilingual approach did achieve progress and good results in mastering their mother tongue, foreign language, and the specialty discipline, as well as gained a high level of professional competence. This technique enhances mental flexibility, improves intercultural skills and professionalism (Cambridge, 2017, p.2).

*Problem statement.* On the basis of scientific material systematization, it became clear that in the conditions of the Ukrainian higher education system, the above-mentioned advantages are difficult to achieve, since institutions of higher education face a number of obstacles. First, students are not motivated, as they study foreign language only as a basic course, which involves communication on everyday topics, usually only those that relate to everyday life. And obviously, while students do not face the real needs of foreign language communication at a professional level, they will not have the motivation to master foreign language. Secondly, the number of hours provided by the curriculum for the study of a foreign language is critically inadequate, which makes it impossible to master any foreign language at a high level. For example, in non-linguistic specialties, students have foreign language on average only once a week, which is studied only for two years (4 terms). The total number of hours allocated to classroom and independent study is only 240 hours per two years, of which the number of practical classes is only 96 hours. If we are talking about European integration, then the future the student is expected to face the need to communicate a foreign language, or to take an exam to determine the level of foreign language proficiency. According to the global scale (Nikolayeva, 2003, p.47), there are six levels of knowledge of a foreign

language (A1-A2, B1-B2, C1-C2). Certainly, under such studying process conditions, the level of foreign language proficiency can not be high.

If we take into account foreign experience, then in European countries faced the similar problem. It is said that in order to master at least B2, a student must have 500-600 hours of individual training (with a teacher), but in practice students have four hours per week, that is, sixty-four hours of a foreign language for the semester (Granados-Beltran, 2013, p.252). And the problem of the low level of students' proficiency in English when entering HEI is also relevant because, as in Ukraine, this level is lower than A2, which requires further additional training.

Thirdly, both in Ukraine and in European countries, there is another problem. In order to teach professional courses using a foreign language, the instructor should possess a fluent command of a foreign language and present the studying material on specialized disciplines in a foreign language only. However, as practice displays, the level of proficiency of teachers in a foreign language makes it impossible to develop the process outlined above. An English-speaking specialist in European countries did not have the experience of guiding a lecture on a particular subject due to difference of work schedule, workload, insufficient motivation, etc. (Granados-Beltran, 2013, p.253).

***Partial hypothesis.*** In our opinion, at the initial stage of introducing a bilingual approach to the system of teaching specialist disciplines in a foreign language, the involvement of English-speaking specialists in HEI would be positive. Therefore, it is very important to prepare specialists who would be able to fill this gap in the educational process in HEI. Based on foreign experience, scholars and practitioners suggest using a basic foreign language course synchronously with bilingual courses in specialized disciplines. In particular, we share the scientific position of J. Gonzalez (2015), who emphasized in his research that this approach would expand the student's horizons and deepen their knowledge of English within the framework of future professional activities (Gonzalez, 2015).

Abroad has accumulated considerable experience in constructing a foreign language learning curriculum to acquire a sufficient level of knowledge (B2), including English language, subjects being taught in English, and additional classes (Baker, 2011; Kouega, 2008; Porter, 1990; Pavon & Gaustad, 2013). Only under such conditions a student can achieve high results in mastering a foreign language of professional level (B2/C1) – this is yet another of the ***partial hypotheses***. The demonstration above is presented in the diagram of fig. 2 (see figure 2).

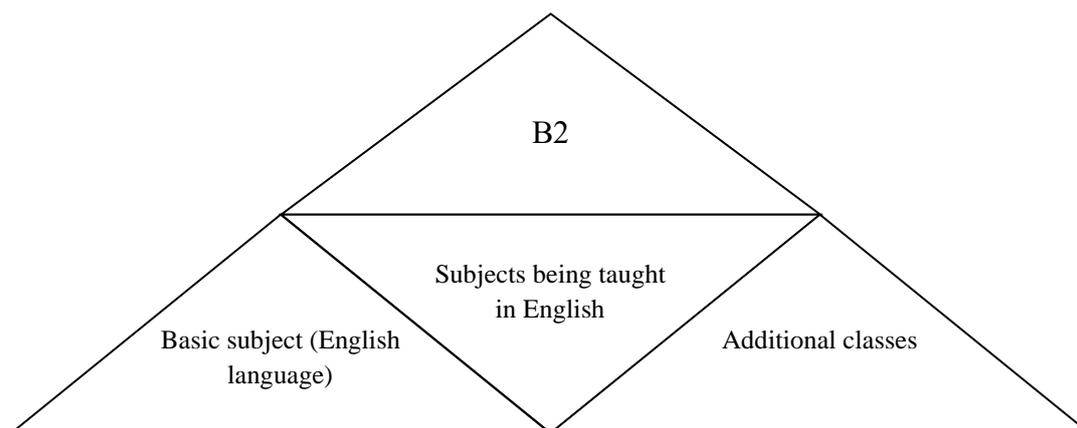


Figure 2 *Language policy with a bilingual approach in Europe*

To master the skills of language competence at a high level, different models of bilingual education are introduced. So, researcher C. Baker (2011) highlights the following models: transitional, supporting, enriched. *Transitional model* – does not involve the use of special language programs, students study in classes with teaching subjects in English. However, as the scientist argued, “this model significantly weakens the identity of minority children with their native language and culture of the family” (Baker, 2011, p.172). *Supportive model* – aimed at studying the native language (of ethnic minorities), the bilingualism development and biculturality of students. Communicative competence is achieved through the study of two languages (native and foreign) (Baker, 2011, p.195). *Enriched model*, in turn, is aimed at achieving full bilingualism or a certain language competence (Baker, 2011, p.188-189).

### **Results of empirical research**

**Stages of research.** Experimental research was carried out during 2014-2018 and was realized in three stages (2 times for 4 semesters for students of the 1-st and 2-nd yearsof study of non-linguistic specialties). Experiment covered 507 students who were studying in The Bohdan Khmelnytsky National University of Cherkasy and Pereiaslav-Khmelnytskyi Hryhorii Skovoroda State Pedagogical University.

On the first stage (2014-2015), the study of the state of foreign language students’ training of non-linguistic specialties was conducted. On the basis of observations, the questioning of students of the 1st and 2nd year of study, the analysis of practical classes in the “Foreign language of professional orientation”, colleagues’ classes attendance, the results of students’ written works, the following facts were determined.

The results of the empirical research showed that about 68% of students were able to independently master up to 20% of the material from the “Foreign language of professional orientation”. At the same time, for 32% of respondents, this figure was only 7% or less. At the same time, during the experiment, we found out that 70% of its participants from the total number mastered the material during the classes in Foreign language of professional orientation at the level of deep awareness, although at the same time they adopted no more than 50% of the total amount of information, all the rest they write automatically. Only 7% of 1<sup>st</sup> year students said that they are not usually prepared carefully for the test work (TW), if they were not informed about it in advance. However, this figure was somewhat higher and was 10% for the 2<sup>nd</sup> year students.

In the course of the experiment, it was found out that 60% of students needed additional training, in particular, teacher’s consultations after the TW. They, as it turned out, are not able to resolve their own faults in their own foreign language knowledge and skills. Only 4% of the respondents generally did not pay attention to the result of the TW, nor to the level of knowledge and did not desire to improve it. The data obtained also gave reasons for stating the following: 50% of the number of students who participated in the survey considered it necessary to attend at least one tutorial per week. Instead, 30% indicated that they needed more additional tutorials, because they did not have time to master the material that is necessary to be prepared for practical classes. 23% of students stated that they were more complicated to perform homework than those offered in practical classes, and therefore had difficulty doing them on their own. Only 2% of the questioned respondents indicated that they were assisted by methodological recommendations (manuals, prepared by teachers) on the subject “Foreign language of professional orientation” during the homework and individual tasks implementation and preparation for the TW. All the rest of students noted that they only use lecture notes and examples of the tasks that they put together during the practical classes together with the whole group.

Of the total number of students who participated in the experiment, only 8% of respondents said that they never performed home and individual tasks on their own. But for most students, the implementation of such a kind of problem helped to generalize, systematize the listening educational material, consolidate the acquired knowledge and skills. In addition, it allowed, as noted by the respondents, to identify their own gaps and work extra (listening, grammar, vocabulary, etc.), in order to eliminate the shortcomings in time and not to let foreign-language studies into self-esteem. To the question: “What, in your opinion, prevents some students of your group from successfully passing the exam on the “Foreign language of professional orientation”, 40% indicated that they have a low level of knowledge, they’ve got at secondary school.

Consequently, the results of the conducted students' questioning gave reasons to call to question the traditional approach to organizing the process of studying on the subject "Foreign language of professional orientation" in the HEI. This was due to the experimental application of the bilingual approach in teaching a foreign language for future specialists.

The analysis of psychological and pedagogical and scientific and methodological literature has shown that the bilingual approach is appropriate to consider as a relatively independent and rather important methodological approach to educational process organization, which gives the opportunity to take into account the specificity of each stage of the professional competence of future specialists' formation in non-linguistic specialties more fully. The obtained results gave reasons to formulate assumptions about the possibility of improving the professional training of students of non-linguistic specialties through the development and implementation of a bilingual approach in teaching of some specialty disciplines in the educational process.

At the first stage, the following directions of work were highlighted:

- 1) revealing the theoretical and methodological principles of improvement of language training of students in the process of foreign language teaching;
- 2) the development of methodological materials of bilingual content that would take into account the requirements of modern higher education, the personally oriented system of education, the requirements of individualization and differentiation of training that would not overburden teachers and students;
- 3) the search for such forms, methods and means of studying that would help to preserve and improve the quality of residual knowledge and skills of students and improve the efficiency of independent work of students, including through specially developed methodological materials of bilingual content.

***Task of experimental research.*** Taking into account the results obtained, it was important to analyze in detail the current state of training of students "Foreign language of professional orientation" and the experience of teachers in organizing the process of studying professional disciplines in a foreign language, in particular, organizing the bilingual course of teaching a foreign language. Particular attention was needed to the analysis of teachers' experience concerning the formation of professional competencies of non-native speakers in foreign language classes, since this problem required the search for ways to solve it.

Teachers were asked to answer the question: "What methodological approaches are important in the formation of competent foreign language proficiency for students with different levels of academic achievement?" The

actual figures obtained during the conduct of questionnaires among teachers of HEI are given in table 1 (see table 1).

*Table 1 Results of teachers' questionnaires (\*conventional signs)*

Methodical approaches	Elementary level	Intermediate level	Advanced level
Audio and visual	++	+	-
Communicative	-	+	++
Suggestive	++	+	-
Audio and lingual	-	-	-

\* ++ – is systematic, + – is carried out episodically, – – is never carried out.

Thus, the following conclusions can be drawn: the results of the analysis of the experience of teachers of HEI's professional activity have shown that the process of their competent foreign language proficiency formation in the student's professional direction is mostly spontaneous, unplanned, and occurs episodically.

At the second stage (2015-2016), a search experiment was conducted. Special attention was paid to organizing and conducting classes in a foreign language using the bilingual approach. The need for such an adjustment is substantiated by the results of an empirical study of the relationship between the current assessment received by students in the process of conducting entry testing (ET-1) and the exams on the course "Foreign language of professional orientation" (this implies an assessment, which was received at the first attempt to pass the exam). The obtained data confirmed our assumptions about the dependence between the level of students' training in the "Foreign language" during school course and the successful training of a foreign language of professional orientation at HEI. The summary results are presented in table 2 (see table 2).

*Table 2 The value of the correlation coefficient between the ET and exams from a "Foreign language of professional orientation"*

Levels	1 <sup>st</sup> term examination	2 <sup>nd</sup> term examination	3 <sup>rd</sup> term examination	4 <sup>th</sup> term examination
0–59 (elementary)	0,89	0,90	0,91	0,88
60–74 (pre-intermediate)	0,85	0,65	0,61	0,6
75–90 (intermediate)	0,89	0,76	0,70	0,72
91–100 (upper-intermediate)	0,87	0,82	0,8	0,78

At the end of the second phase of the experiment, adjustments were made between incoming knowledge and skills of students who were trained using the bilingual approach. So, the second TW was conducted, certifying the existing section of knowledge and skills of students from a “Foreign language of professional orientation” (ET-2). The results obtained for the implementation of the TW are shown in fig. 3 (see figure 3). We emphasize that the segment of the educational process aimed at the formation of professional competence by means of a foreign language using a bilingual approach was only for those students who received less than 60 points for the first TW. Thus, only students from this subgroup should have written the TW again. Hence, we can generalize: the results obtained at the 2<sup>nd</sup> stage of the experiment, the results of work with students give grounds to assert the effectiveness of the suggested fragment of the bilingual approach in the process of study.

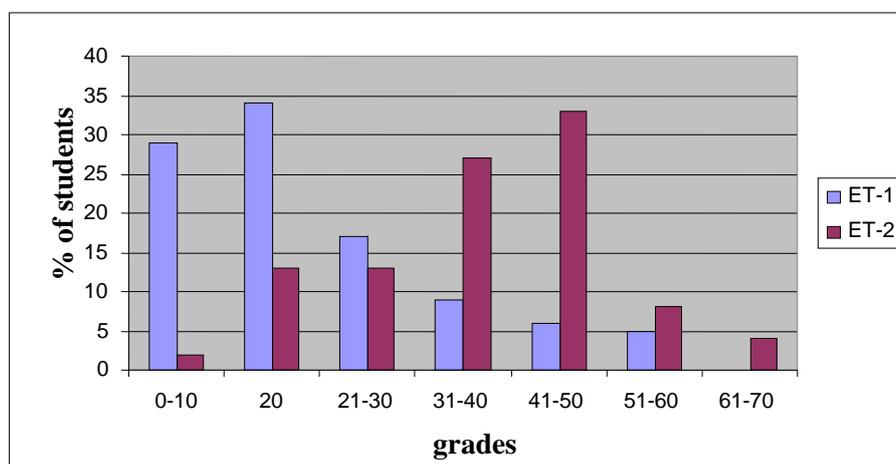


Figure 3 The results of the first and second entry testing

At the stage of the search experiment, the development of application in professional disciplines teaching using bilingual approach was carried out, aimed specifically at the formation and development of competent students' foreign language professional knowledge. This, in turn, should ensure an increase in the effectiveness of the study process as a whole. Through questionnaires, we were assured that students consider the introduction of a bilingual approach in the study process to be very useful and effective to use the acquired knowledge in their further professional activities. Therefore, we made the *assumption* that the implementation of the bilingual approach during classes on professional disciplines would increase the level of foreign language proficiency of students. Consequently, at the second stage of the experimental study, the testing of developed bilingual techniques was carried out and the search for the most effective forms of conducting classes from a foreign language for non-linguistic specialties was carried out.

To test the effectiveness of the bilingual approach, 10 experimental groups (EG) were selected (251 students of the first year of specialties Social work, Pre-school education, Fine Arts, Decorative Arts, Hotel and Restaurant Business, Tourism) and 10 control groups (CGs) (256 students of the 1-st year of the same specialties) (verification of the hypothesis about the normal distribution of the general totality from which the sample was performed was carried out according to the criterion  $\chi^2$  using MathCad). The groups were selected so that the selective average academic success of the students in the CGs was not lower than that of the EG students. Academic success of the student was determined by the results of the incoming TW. Data is given in table 3 (see table 3).

*Table 3 The results of the TW performed by CG and EG*

N=507

Number of CG	Average grade	Sample variance	Quality at %	Number of EG	Average grade	Sample variance	Quality at %
1	3,23	0,89	32,21	1	3,21	0,73	31,25
2	3,12	0,82	30,57	2	3,15	0,89	30,45
3	3,17	0,72	28,86	3	3,32	0,78	28,92
4	3,31	0,74	31,47	4	3,05	0,62	25,62
5	3,28	0,67	25,89	5	3,11	0,95	32,56
6	3,09	0,58	28,65	6	3,24	0,83	33,59
7	3,12	0,62	32,42	7	3,16	0,57	22,34
8	3,1	0,83	31,25	8	3,3	0,64	30,89
9	3,34	0,81	27,24	9	3,23	0,72	34,23
10	3,25	0,61	29,67	10	3,05	0,91	27,56
<b>Average value</b>	<b>3,201</b>	<b>0,729</b>	<b>29,823</b>	<b>Average value</b>	<b>3,182</b>	<b>0,764</b>	<b>29,741</b>

After introduction suggested methodology of implementation the bilingual approach to the study of a foreign language during the first term of the educational process, we were able to determine the dynamics of changes in the average grades of achievement in the control and experimental groups. In the next diagram 4 (see figure 4), the average grade for students passing credit tests (CT) in a foreign language in the first (CT 1 – CT 11, CT 2 – CT 12) and the second academic semester (CT 1 – CT 21, CT 2 – CT 22), and, accordingly, examination control for the first (EC 1) and the second (EC 2) academic terms. We note that during the experiment, the value of sample dispersions in each of the control and experimental groups was investigated. The results obtained at this stage of the study showed that the dispersion indices in the control groups were almost unchanged, whereas in the experimental ones – dispersions were characterized by a decrease, although not significantly. Thus, we consider this fact as the one that, in the absence of a decrease of the average grade, it will cause an increase qualitative indicator level of academic achievements while

studying the foreign language by students of experimental groups. At the same time, we note that the connection between the academic achievements of students in mastering a foreign language through the bilingual approach introduction, which was recorded during the execution of CT 12, CT 21, CT 22, and passing the EC 2, as a training material was taught by two languages, seems to be very significant. According to our scientific position, this is due to the fact that the interim control was verified during the implementation of the relevant control actions, which had a significant connection to the related subjects with the subject “The English language”.

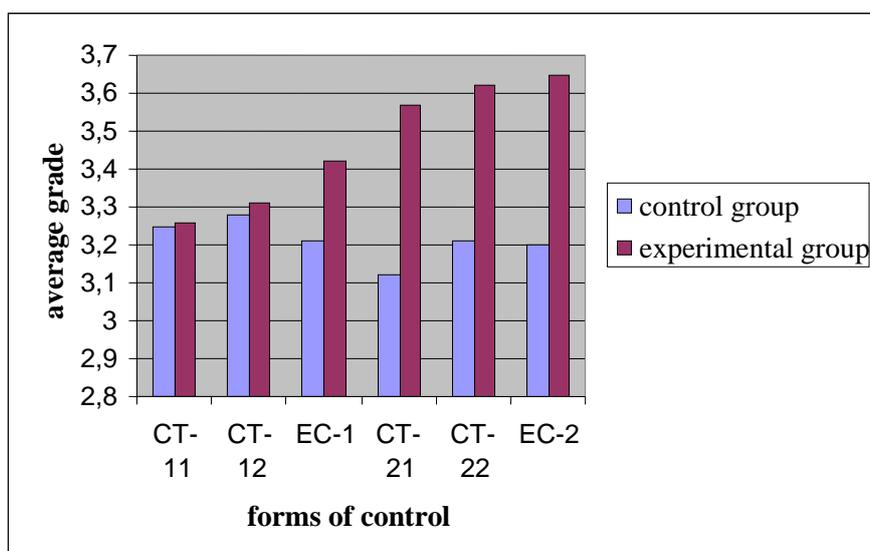


Figure 4 Average grades at CG and EG (based on the results of different forms of control)

On the basis of the result analysis, we made the following generalizations: the use of the bilingual approach in the study of a foreign language suggests that the tendency to increase the average grade in experimental groups is due to the influence of such a factor as the introduction into educational process of bilingual teaching of disciplines using the developed method. The reliability and probability confidence of this assumption can be achieved by using a one-factor dispersion analysis, the results of which indicate a positive impact on the foreign language teaching using bilingual approach developed by us. So, during the experiment, we focused on the indicator of maintaining the quality of residual knowledge and the formation of skills for students from the course of Foreign language of professional orientation in general. This led to the verification of the experimental results of the study. In particular, in the fifth academic term and at the beginning of the sixth term, rector’s comprehensive test works on the discipline “Foreign Language” (RTW-5) were organized. The calculation of the average scores obtained by the students from the control and experimental

groups according to the results of the assessment of the knowledge recorded in the TW, compared with the average grade of the last exam on the course of “Foreign language of professional orientation” is given in table 4 (see table. 4).

*Table 4 Changes of the average score of residual knowledge and skills of students on the course “Foreign language of professional orientation” in general (on the results of RTW)*

<b>CG number</b>	<b>Exam</b>	<b>RTW-5</b>	<b>RTW-6</b>	<b>EG number</b>	<b>Exam</b>	<b>RTW-5</b>	<b>RTW-6</b>
1	3,45	3,21	3,2	1	3,86	3,78	3,71
2	3,62	3,34	3,18	2	3,57	3,54	3,48
3	3,51	3,25	3,18	3	3,69	3,62	3,58
4	3,25	3,12	3,04	4	3,89	3,81	3,76
5	3,52	3,26	3,25	5	4,03	3,95	3,92
6	3,27	3,11	3,1	6	4,08	3,92	3,89
7	3,37	3,21	3,15	7	3,62	3,59	3,48
8	3,31	3,09	3,12	8	3,81	3,76	3,68
9	3,71	3,34	3,21	9	3,45	3,43	3,21
10	3,45	3,32	3,25	10	3,61	3,58	3,14
<b>Average value</b>	<b>3,446</b>	<b>3,226</b>	<b>3,168</b>	<b>Average value</b>	<b>3,761</b>	<b>3,698</b>	<b>3,585</b>

*N=507*

Based on the results obtained in the experimental (No. 9 and No. 10) groups during the second, third and fourth terms, mandatory credit test was canceled. In the table (see the digital indicators of the corresponding column), an average score based on the results of credit test is presented. For this reason, only about 5% of the total number of students in these experimental groups passed the exam. As a rule, these were students who demonstrated a low level of academic achievement in the discipline “Foreign language of professional orientation”. Thus, if in the process of organizing the study of this discipline in the way of traditional teaching, the impact on the quality of the performance was not vivid (despite the slight increase in the high level of educational material mastering, which took place at a much slower pace than other experimental groups), the quality indicator of residual knowledge and the skills were vivid. Hence, we summarise that the influence of the use of the bilingual approach convincingly proves the necessity of teaching professional disciplines in a foreign language. In its turn, this greatly enhances the quality of obtaining, consolidating and preserving the results of training in this discipline and raises the level of students’ professional language competence in a foreign language formation at a higher level.

## **Discussions**

Changes in the Ukrainian society as a whole and in the educational sphere in particular, led to a rethinking of goals, methods and approaches to learning. Especially this process has affected the level of tertiary education, what is reflected in a number of documents adopted at the state level (The Law of Ukraine: About Higher Education, 2014). This is due to the process of Eurointegration, taking place in the Ukrainian state, as well as due to not only new social needs, but also new high requirements for future specialists. Particularly acute was the issue of fluent foreign language proficiency by future specialists in order to increase their employability in the labor market (Lokhvytska, 2015, p.63; Martovytska, 2017, p.207; 2018, p.67).

The study of this issue on a global scale has made it possible to state that the scientific problem under study has, to a large extent, also become relevant to former colonies of the English-speaking countries or countries bordering the English-speaking countries, with ones EU members (France, Mexico, Spain and etc.). However, these countries have already gained some experience in its solution and have received relevant results and determined the direction of work in this field. In particular, V. Pavon and M. Gaustad (2013) were concerned with the designing bilingual programmes for higher education in Spain. In their work, they clearly identified the structural and organizational measures for the successful implementation of bilingual programs in the educational process of HEI.

The aforementioned recommendations were partly found in the study we proposed. At the same time, we would like to state that the scientific achievements of these scholars have a much wider range of applications, which should be implemented in the educational process of HEI of Ukraine. However, the application of the recommended methodology by the scientists (Pavon & Gaustad, 2013) should pass the testing stage, taking into account the requirements for the developed state standards that will come into force in the nearest future in Ukraine.

We also see the peculiarity of the fact that the presented bilingual approach is characterized by certain difficulties for implementation into the educational process. The specification of the above is suggested in the scientific paper by C. Baker (2011), J.-P. Kouega (2008), R. Porter (1990), who have described in detail and identified as positive indications, and drawbacks in the process of bilingual approach application. The outlined difficulties also occur the tertiary level of Ukraine, which is convincingly proved by the results of the research. However, taking into consideration, home and foreign experience, we have come to some conclusions that determine the benefits of an adequate

implementation of a foreign language precisely because of the bilingual approach implementation in the educational process with students.

### **Conclusions**

Thus, the essence of bilingual teaching approach is a combination of teaching basic subjects Foreign Language and of specialized subjects in a foreign language. This approach contributes to the development of cognitive thinking and increases the level of proficiency in a foreign language.

The given approach is used in European countries, which combines the basic subject of a foreign language with additional classes and separate professional disciplines, taught in a foreign language. With the systematic observance of all conditions and the continuity of the process, the application of this approach is effective.

We have found that students entering non-linguistic specialties in HEI have approximately the same level of language competence in a foreign language, and as practice shows, it is not high. Method of teaching professional subjects in the foreign language has been introduced into the curriculum and proved to be effective according to the experimental verification of its results. Thus, it significantly increases the level of students' communicative competence of a foreign language for special purposes.

However, a complete transition to bilingual education is a complex and lengthy process. This is, first of all, the lack of foreign-language specialists of certain disciplines on their specialities, a small number of academic hours of the basic discipline Foreign language for non-linguistic specialties, a gap in the study of a "Foreign language" at HEI, since students study this subject only 4 terms and continue studying it only in 9-10 academic terms.

The effectiveness of the basic subject "Foreign language of professional orientation" combined with the teaching professional disciplines in a specialty using foreign language is indisputable, since such an approach will ensure the further development of foreign language speech competence, focus on the subject and contribute to increasing the motivation of students to study it.

Perspectives for further scientific work are seen in the development of technology for retraining teachers to implement the bilingual approach in teaching disciplines on their specialities at the HEI.

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## TEACHING INDUSTRY 4.0

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**Abstract.** *Industry 4.0 is a term that was introduced by the German government at the time of the Hannover Fair in 2011 in relation to an initiative brought forward to support German industry in addressing future challenges. It refers to the 4th industrial revolution, in which disruptive digital technologies, such as the Internet of Things (IoT), robotics, virtual reality (VR), and artificial intelligence (AI), are exercising a notable impact on industrial production. Industry 4.0 takes the emphasis on digital technology of recent decades to a whole new level with the help of interconnectivity through the Internet of Things (IoT), real-time data access, and the introduction of cyber-physical systems.*

*This paper focuses on the design of an educational module for higher education mechatronics students. Introducing Industry 4.0 into a mechatronics curriculum will reinforce the integration of student competences in flexible and rapid manufacturing. The module includes notions of machine learning and deep machine learning, which are essential in robotics and behavioral robotics and closely interact with control theory. The results of a pilot training activity in the field are also illustrated and discussed.*

**Keyword:** *industry 4.0, mechatronics curriculum, mechatronics education, machine learning, smart factories.*

### Introduction

It is broadly accepted that human society has, to date, passed through four distinct industrial revolutions, which can be individuated as follows:

1. The First Industrial Revolution - that occurred between the late 1700s and early 1800s. The key characteristics of this revolution were the use of water and steam-powered machines, and the introduction of more optimized forms of working.
2. The Second Industrial Revolution - in the early part of the 20th century, was characterized by the introduction of steel and the use of electricity in factories. During this phase, concepts of mass production such as the assembly line were introduced as a way of boosting productive output.

3. The Third Industrial Revolution - slowly began to emerge in the late 1950s as manufacturers began incorporating more and more electronic and digital technology into their factories.
4. The Fourth Industrial Revolution, or Industry 4.0 - that has come about over the last few decades, is based on the integrated use of digital technology and new levels of interconnectivity through the Internet of Things (IoT), allowing real-time access to data and the introduction of cyber-physical systems.

Industry 4.0, more specifically, is a term introduced by the German government at the Hannover Fair in 2011 in relation to an initiative it brought forward to support German industry to address future challenges (Qin, Liu, & Grosvenor, 2016). It refers to the 4th industrial revolution in which disruptive digital technologies, such as the Internet of Things (IoT), robotics, virtual reality (VR), and artificial intelligence (AI), are having an impact on industrial production (Lasi, Fettke, Kemper, Feld, & Hoffmann, 2014).

Over the last few years, the term *Industry 4.0* has become an often-quoted buzzword, used fairly indiscriminately to describe digitalization in any phase of the value chain of an enterprise (Herman, Pentek, & Otto, 2016). Indeed, it encompasses the full range of activities that an enterprise must instigate in order to create a product or service (European Commission, 2018). It is primarily focused on how production shop floors operate at the current time, but also involves elements of procurement and supply management (Glas & Kleemann, 2016).

### Basic concepts of Industry 4.0

M2M (machine-to-machine), big data, AI, and IoT are all characterizing elements of Industry 4.0. In an Industry 4.0 environment, smart machines communicate with each other, manage the production lines, and analyze and solve production issues with minimal human involvement. Amazon warehouses, based on advanced automation solutions and IoT applications, represent one of the most notable examples of Industry 4.0. In an Amazon warehouse, when an order is generated, machines immediately check the availability of the ordered item. If the item is in stock, it is instantly prepared for shipping. The IoT supports this process.

The basic concepts of Industry 4.0 can be outlined, in a non-exhaustive way, as follows:

- **Enterprise Resource Planning (ERP):** encompasses business process management tools used to manage information across an organization;
- **IoT:** an abbreviation for the Internet of Things, is a concept that refers to connections between physical objects such as sensors or machines and the Internet;

- ***IIoT***: that stands for the *Industrial Internet of Things*, is a concept that refers to the connections between people, data, and machines as it relates to manufacturing;
- ***Big data***: refers to large sets of structured or unstructured data that can be compiled, stored, organized, and analyzed in order to reveal patterns, trends, associations, and opportunities;
- ***Artificial intelligence (AI)***: refers to a computer's ability to perform tasks and make decisions that would ordinarily require some degree of human intelligence;
- ***M2M***: stands for machine-to-machine, and refers to the communication that occurs between two individual machines through wireless or wired networks;
- ***Digitization***: that refers to the process of collecting and converting different types of information into a digital format;
- ***Smart factory***: a smart factory is one that invests in and leverages Industry 4.0 technology, solutions, and approaches;
- ***Machine learning***: refers to the ability that computers have to learn and improve on their own through artificial intelligence, without being explicitly told or programmed to do so;
- ***Cloud computing***: refers to the practice of using interconnected remote servers hosted on the Internet to store, manage, and process information;
- ***Real-time data processing***: refers to the abilities of computer systems and machines to continuously and automatically process data and provide real-time or near-time outputs and insights;
- ***Ecosystem***: in manufacturing terms, an ecosystem refers to the potential connectedness between different production functions such as inventory and planning, financials, customer relations, supply chain management (Tjahjono, Esplugues, Ares, & Pelaez, 2017), and manufacturing execution;
- ***Cyber-physical systems (CPS)***: refers to an Industry 4.0-enabled manufacturing environment that offers real-time data collection, analysis, and transparency across every aspect of a manufacturing operation.

### Smart factories

Industry 4.0 and Smart factories are terms that are often used synonymously. The focus of a smart factory is in realizing flexible and rapid manufacturing, dynamic reconfiguration, and the optimization of production according to the

changes in the business model and consumer behavior. Further, in smart factories, the manufacturing resources migrate from local databases to cloud servers.

The architecture of a smart factory is composed of four layers, namely: *physical resource layer*, *network layer*, *data application layer*, and *terminal layer*.

The physical resource layer includes all manufacturing resources involved in the entire manufacturing life cycle, included these that are needed for intelligent manufacturing.

Currently, the manufacturing equipment in a workshop has a strong specificity and a relatively narrow range of application. The consequence of this is a reduced manufacturing flexibility and reconfigurability. Instead, the modularization of manufacturing units improves the dynamic scheduling and reconfigurability of production and control.

A modular-adaptive and self-contained reconfigurable robotic island has been suggested as a way to improve the assembly capacity of the workshop. For this purpose, a distributed algorithm for reconfiguration of lattice-based modular self-reconfigurable robots has been proposed. This would drastically simplify configuration of robots through iterative approaches.

The intelligent level of a smart factory is closely related to the modular manufacturing unit. Figure 1 illustrates the necessary components required to support a modular manufacturing unit.

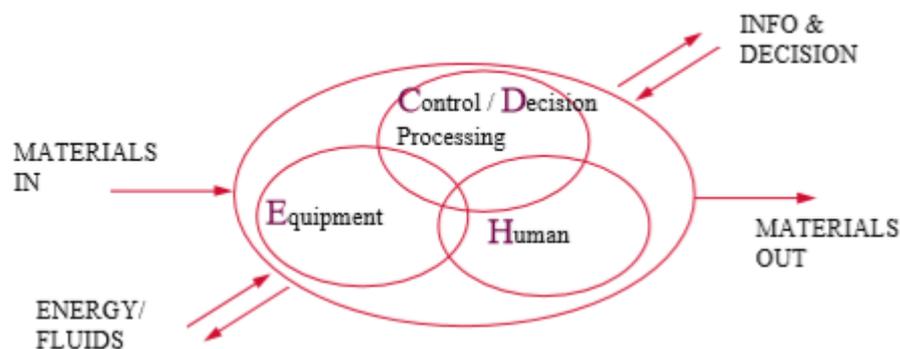


Figure 1 A modular manufacturing unit (source: McFarlane, 1998)

In a manufacturing unit, the configurability of the control system can improve the configurability of the manufacturing unit itself. Recently, multi-agent technology, knowledge modeling, and reasoning technology are being applied in the control system. Ontologies and resource descriptions based on XML have been proposed for reconfiguring production systems rapidly and automatically.

The reconfigurable production line represents a basic component of flexible manufacturing in a smart factory. It provides variability, scalability, and

schedulability, allowing a versatile and timely response to the demands of the market.

In smart factories, wireless sensor networks (WSNs) are employed for data acquisition and logging, as well as for processes monitoring. The most common types of wireless sensor networks are Radio Frequency Identification (RFID), ZigBee, and Bluetooth. ZigBee is an open global standard for wireless technology designed to use low-power digital radio signals for personal area networks.

### **An educational module on Industry 4.0 for higher education students**

For the 2019-2020 academic year at the Rezekne Academy of Technologies, it was decided to introduce an experimental module on Industry 4.0 to the Mechatronic curriculum of the Faculty of Engineering. The leader of the mechatronics course was persuaded that the course curriculum should be revised and reintegrated so as to provide students with new notions and competences to tackle the changes brought about by the fourth industrial revolution.

This finding also emerged as an exigent theme from NewMetro, a 36-month project supported by the EU in which the Rezekne Academy of Technologies is participating, that is aimed at developing an innovative European framework of competencies for mechatronics education.

The specific content for the module on Industry 4.0 was decided by professors and researchers coming from a wide range of backgrounds such as machine control, computer science, and process optimization. From this roundtable discussion, a module of 30 hours was designed, comprising 15 hours of theoretical notions and 15 hours of practical exercises.

The theoretical part was delineated as follows:

- 3 hours: general concepts - including the four industrial revolutions, smart factories, the value chain of an enterprise, etc.;
- 3 hours: basic concepts - such as machine to machine (or M2M) communication, big data, AI, and the IoT;
- 4 hours: industry software - for example business process management tools (or ERP), cloud computing, and cyber-physical systems;
- 3 hours: the four main features of Industry 4.0 - namely vertical networking of smart production systems, horizontal integration via a new generation of global value chain networks, through-life engineering across the entire value chain, and acceleration through exponential technologies;
- 2 hours: presentation and discussion of examples.

The exercises were prepared by researchers focusing on practical aspects of automation and robotics in modern industry, such as dynamic reconfiguration and

the optimization of production according to the changes of business model and consumer behavior.

Lessons were designed with a view to presenting the new approach to production control, multi-agent technology, knowledge modeling, and reasoning technology. Ontologies and resource descriptions based on XML were introduced as a means to reconfigure production systems rapidly and automatically. Indeed, as previously mentioned, the reconfigurable production line is a fundamental component of flexible manufacturing in a smart factory, since it provides variability, scalability, and schedulability to enable a versatile and timely response to evolving market requirements. It was decided to then experiment the new module on a select group of students.

### **Some considerations on an ongoing experience**

From the first lessons, it was evident that the learning program should be modified and integrated.

The concept of Industry 4.0 still lacks a shared definition (Herman, Pentek, & Otto, 2016). It can be applied to the digitalization at any step of the *value chain* of an enterprise. A value chain is a business model that describes the full range of activities needed to create a product or service.

For companies that produce goods, a value chain comprises the steps that involve bringing a product from conception to distribution, and everything in between, such as the procuring of raw materials, manufacturing functions, and marketing activities.

As a consequence, Industry 4.0 encompasses the full range of activities of an enterprise necessary to create a product or service. The use of the term primarily focuses on how production shop floors currently operate, but also includes procurement and supply management (Glas & Kleemann, 2016).

The different levels of specialization make it impossible to deal with all the variety of topics related to Industry 4.0 appropriately. The didactic materials and learning programs available on the internet confirm the difficulty of creating a complete learning program that encompasses all the aspects that are connected to Industry 4.0 and that have been highlighted in the first paragraphs of this paper.

One can find, for example, that an Industry 4.0 module should make students familiar with cloud computing and Robotic Process Automation. However, they should also understand key technologies related to IoT and industrial applications of Data Analytics. Nevertheless, experience teaches us that a course in Data Analytics requires many hours of study. The same is true for Cyber Security and Cyber-Systems from the Industrial systems perspective. Problems also arise with the use of Machine Learning and Artificial Intelligence. Finally, it is not easy teaching AI, since it covers a broad scope where there are many specializations,

such as computer vision, natural language processing, machine learning, game playing, expert systems, decision support systems, speech recognition, intelligent information retrieval, robotics, etc. Each of these specializations require specific knowledge.

Students participating in the Industry 4.0 module had different backgrounds in computer science, and had varying levels of familiarity with computer programming. It was therefore necessary to spend some time introducing notions propaedeutic to the basic concept of AI. Nevertheless, the practical component of the AI module presented some issues. Free Industry 4.0 platforms are not available, for example, although there are some webinars available that present good examples. Accordingly, a few commercial software solutions have been analyzed and discussed with students, providing them with a basic picture of what they can find in a real enterprise.

### **Conclusion**

This paper has reported on the introduction of a module on Industry 4.0 recently included in the mechatronics study program of the Faculty of Engineering at the Rezekne Academy of Technologies.

The training experience carried out in support of this module has been useful. In particular, it highlighted the need to introduce a module on artificial intelligence, as a prerequisite to that on Industry 4.0. This module should include, above all, the main concepts related to machine learning. In addition, attention should be paid to Bayesian inference, since numerous artificial intelligence algorithms are based on this. A background knowledge of intelligent problem-solving should also be developed, as well as strategies appropriate to the context of industrial production.

The introduction of an autonomous module on artificial intelligence would allow more attention to be paid to the integration of processes and industrial production issues.

However, it would be helpful to focus attention on concrete cases of industrial production, preparing exercises that allow students to become familiar with the main problems in the field, and the techniques for finding solutions.

Finally, during the training experience, the need emerged to begin developing an ad hoc digital training environment based on the principles of smart learning.

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## **(RE)CONSTRUCTION OF THE EDUCATIONAL EXPERIENCE IN FUTURE TEACHERS' VISIONS OF THEIR PROFESSIONAL ACTIVITY**

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**Abstract.** *The article presents the results of a scientific research obtained after the phenomenological content analysis of future teachers' visions of their professional activity. In future teachers' visions of their professional activity the representations of the (re)construction of the educational experience are clearly observed. The informants of the research reflecting on their experience of learning at school and the vision of their professional pedagogical activity reveal the content of pedagogical activity and its transformations.*

*The article analyses how the person's relationship to significant "others" constructs the knowledge about the teacher's role. The "sub-world" of the educational experience, that is experienced and internalized by future teachers during the period of their learning at school and (re)constructed during their pedagogical studies is, in fact, an integral reality.*

*Thus the (re)construction of the previously internalized educational experience is revealed as the new content of the educational experience arises. The results of the research permit to state that future teachers in the processes of the (re)construction of the educational experience do not demonstrate a strong identification with the internalized content of pedagogical activity/educational experience during their learning at school.*

*The problem question of the research – what content of the educational experience at school do future teachers reflect on and how is the (re)constructed educational experience reflected on or recognized in the visions of professional activity.*

**Keywords:** *educational experience, professional vision, future teachers.*

### **Introduction**

The reconstruction of teacher training in Lithuania today is a national priority. For that purpose, the forces of the specialists in various fields (as well as international experts) are brought together and their actions are focused on various parameters of the quality of teacher training: the concentration of scientific pedagogical staff in national teacher training centres to strengthen research-based teacher training; the improvement of the system of selection for pedagogical studies; the structure and content of the competences needed to develop are reviewed and updated, etc. Alongside with the upgrading of the system of future

teachers' training, the system of the improvement of the qualification of teachers is also being changed. The concept of professional growth is established, when there is a very clear relation between the links of teacher training and independent pedagogical activity, i.e. professional growth begins in the first year of pedagogical studies and continues throughout the whole period of pedagogical professional activity. The curriculum of general education also began to be updated, the realization of which will require the teacher's extremely high-quality and innovative acting in the educational reality. These processes require responsible and well-thought political decisions and clear economic justification creating reliable instruments of forecasting the need for teachers, they also require a clear understanding of sociocultural and socioeducational context, in which and for which a future teacher will be trained. *Consequently, one of the components of the formation of such understanding is knowledge based on scientific research and knowing about the personality changes of the future teachers studying in pedagogical studies* (Uerz, Volman, & Kral, 2017; Lenkauskaitė, 2019, etc.) *and the meanings of the teacher's profession and pedagogical activity* (Cibulskas & Žydzūnaitė, 2012). In this context, the authors of the research concretize the problem of the research formulating the problem question of the research: *what content of the educational experience do future teachers reflect on and how is the (re)constructed educational experience reflected on or recognized in the visions of professional activity.*

Future teachers' professional visions are related to the meanings of culture and context, which are important in order to perceive the social processes taking place in the field of pedagogical activity (Ho & Tan, 2013). The sociocultural context determines attitudes, beliefs, and thinking. It means that the future teacher's active position in these environments and activities where he/she finds himself/herself is very important, consequently, the future teacher has an opportunity to actively (re)construct the educational experience.

Reflecting on the experiences of teaching/learning at school becomes a basis for the (re)construction of the educational experience creating personal visions of the professional pedagogical activity (Lenkauskaitė & Masiliauskienė, 2019). Various scientists (Ho & Tan, 2013; Uerz, Volman, & Kral, 2017; Lenkauskaitė, 2019; Lenkauskaitė & Masiliauskienė, 2019, etc.) point out that for the (re)construction of the educational experience, the future teacher's ability to critically evaluate experiences focusing on the things that should be or could be is especially important. The contents of the (re)construction of the educational experience can cover various aspects such as teacher-student relationship, creation of a meaningful educational environment, ensuring the quality of education, focus on the success of student's teaching/learning, structure of professional knowledge and understanding of its importance, attitudes towards teaching and learning, etc. (Ho & Tan, 2013).

Research object – (re)construction of the pedagogical experience. The aim of the research is to reveal the contents of the (re)construction of future teachers' pedagogical experience in future teachers' visions of their pedagogical activity.

The methods of the research – the analysis of scientific literature and interview with future teachers. The participants of the research – the research included students of university pedagogical studies, future teachers of preschool education, pre-primary education, subject teachers.

### **(Re)construction of the pedagogical experience as a basis of the creation of future teachers' professional vision**

The processes of the (re)construction of the pedagogical experience are inevitably related to the change of the teacher's role in the modern society. The requirement to be an innovator becomes the essential challenge for the teacher. Not by accident in the previous research on teacher training (Maeda & Asada, 2016) the main focus was on the teacher's knowledge or beliefs. Recently the scientists (Blömeke et al., 2015; Maeda & Asada, 2016; Lenkauskaitė & Masiliauskienė, 2019, etc.) have been increasingly focusing on the learning of the teacher himself/herself, his/her constant improvement, the ability to reflect on his/her pedagogical activity, to accept individual responsibility and develop collective responsibility for educational outcomes, to create and develop authentic teaching/learning practice, to look for new educational strategies, etc. In order to accept such challenges and act respectively, it is necessary to constantly rethink various pedagogical experiences, to (re)construct them and create an authentic vision of pedagogical professional activity.

A professional vision (Goodwin, 1994; van Es & Sherin, 2002; Seidel & Sturmer, 2014, etc.) is understood as an ability to notice a practice that is necessary acting with respective sociocultural groups, responding to the context, in which the action takes place. A professional vision comprises knowledge that allows to understand 1) what pedagogical experiences were experienced by future teachers and 2) how they (re)construct the aforementioned experiences creating the vision of their pedagogical activity. It is important for future teachers to take up an active role analysing the experiences they have and to (re)construct them foreseeing the priority action schemes of the pedagogical activity (Meshede, Fiebranz, Möller, & Steffensky, 2017).

It should be noted that pedagogical experiences are experienced through various social interactions with significant "others". The scientists (Ho & Tan, 2013) also point out that the (re)construction of the pedagogical experience and the creation and contents of the professional vision can be "limited", when a future teacher restricts himself/herself with the reflection only on certain experience (for example, learning at school).

It can be noticed that the analysis of the pedagogical experiences appeals to the relations of the research to the philosophy of pragmatism. Namely the representatives of the philosophy of pragmatism (W. James, J. Dewey) support the idea that “experience is the most important and determining factor in perceiving the world and planning the future” (Duoblienė, 2006, p. 16). Referring to the philosophy of pragmatism, education is based on the analysis of the acquired experience as an important element further designing the processes of education and training.

The construction of experience and educational reality is closely related to the opportunities and need for reconstruction, which can be expressed in the educational process by designing changes, implementing innovations, and foreseeing improvements. The benefits of the reconstruction of education was especially emphasized by social reconstructionists, who highlighted the necessity to teach the younger generation to understand the illnesses of society and to create projects enabling global change (Duoblienė, 2006). Future teachers personally contribute to the (re)construction of educational reality by creating their own visions of the pedagogical activity, thus striving to respond to the challenges posed by a changing society to education, to organize an innovative teaching process that is favourable to the new generation of students.

### **Research methodology**

To obtain the data of the empirical research a written survey was conducted. 23 students of one of the universities of Lithuania who are preparing to become teachers and who voluntarily agreed to participate in the survey, participated in it and presented their professional visions. The research took place in March-April, 2019. During the survey the students were asked to freely describe how they imagine their future pedagogical activity and what has an impact on their vision.

The empirical research is based on the theory of pragmatism emphasizing the importance of experience (Dewey, 2013) and the approach of the construction of social reality (Berger & Luckmann, 1999). The constructivist approach to experience also presupposes the possibility of its reconstruction, which was important revealing authentic professional visions of future teachers.

The results of the empirical research were analysed applying a phenomenological approach (see Mickūnas & Stewart, 1994) highlighting the meanings constructed in future teachers' professional visions. A qualitative content analysis applied in the research gives valuable information for the science and practice of education, helps to form the attitude to a new object or topic of the research, to evaluate the phenomenon under investigation (Žydžiūnaitė & Sabaliauskas, 2017). The research results are structured distinguishing the topics, categories, and subcategories that are predominant in professional visions and

reflect the (re)construction of the educational experience, and also presenting authentic illustrative statements of the informants.

Following the ethics of research the confidentiality of the research participants was assured. Presenting their professional visions they were not asked to indicate their name or surname or other personal data. The professional vision of every participant was encoded and only its number was presented in the data of the article (e.g., PV (pedagogical vision) 5).

### **Participants of the (re)construction of the educational experience as significant “others”**

Analysing the professional visions of future teachers, the network of the “bearers” of social knowledge related to the (re)construction of the educational experience was distinguished. Referring to the research conducted by P.L. Berger, T. Luckmann (1999), the “bearers” of social knowledge are called significant “others”. Consequently, one of the features describing the process of the (re)construction of the educational experience – *significant “others” in the process of choosing the teacher’s profession and significant “others” while studying in pedagogical studies*. The relationship between the research informants and significant “others” is characterised with a dual nature and content, as a consequence of which the educational experience is also respectively (re)constructed.

The internalization of the “sub-worlds” created by significant “others” forms a primary social knowledge about the teacher’s professional activity. However, at the same time significant “others” bear a social message about how the educational experience could/should be modelled. Having conducted a phenomenological content analysis of future teachers’ professional visions, it was revealed that two groups of the “bearers” of social knowledge – significant “others” – are important for the formation of the research informants’ social knowledge about the pedagogical activity and the (re)construction of the educational experience. **The first group** – people who played the strongest role in the formation of the understanding about the pedagogical activity and educational experience. These are significant “others” in the process of choosing the profession of a teacher. **The second group** – significant “others”, whose role is mostly observed in the stage of pedagogical studies: **Group I:** 1) *parents*; 2) *other family members*; 3) *accidentally met people*; 4) *teachers who taught them*; 4) *friends*. **Group II:** 1) *lecturers of a higher education institution*; 2) *mentors of the pedagogical practice*; 3) *peer teachers*.

The relationship between the future teachers and significant “others” *in the process of choosing the profession* creates the conditions to take over the “sub-worlds” of the pedagogical activity created by them. In these “sub-worlds”, the

factor of subjectivity is evident both attributing the features to the teacher's role and particularly characterizing the requirements for the educational experience. Consequently, in the future teachers' professional visions, parents, other family members (siblings, close relatives), accidentally met people, teachers who taught them are significant "others", who are the most strongly emphasized since they have created the conditions for the internalization of the "sub-worlds" of the pedagogical activity understood and created by them:

*People encourage me, motivate me to pursue future pedagogical activity (PV-9-2).*

Later, acquiring more knowledge and experience, as the circle of significant "others" is expanding, the future teachers' social knowledge about the teacher's activity is also being expanded, the educational experience is being (re)constructed. The essential turning point takes place *having started studies in pedagogical programmes*. In this context, the most important role is played by the pedagogical staff of the higher education institution, i.e., the lecturers educating the future teachers:

*My vision of the professional activity is shaped by the lecturers I met during my studies, who provide knowledge of what a teacher should be, what attitudes he/she should follow, and what methods he/she should use in his/her work (PV-21-1).*

The mentors of the pedagogical practice in educational institutions and peer teachers are more weakly emphasized but not less significant. They contribute to the (re)construction of the educational experience, when the future teachers face the real (not only imaginary or designed) context of the pedagogical activity.

The domination of significant "others" in the process of the pedagogical studies reflects how intensely the identification with the teacher's role and the norms assigned to it takes place in the process of the internalization of the educational experience. Consequently, when the future teachers start studies, acquire new pedagogical knowledge and experience, the process of the (re)construction of the educational experience takes place the most intensely as well. When the **experience of learning at school is newly evaluated**, the "**sub-worlds**" of the pedagogical activity of significant "**others**" internalized in the process of choosing the profession **are newly interpreted**. In the process of the (re)construction of the educational experience, the **meanings of the educational experience are created** as the expectations for personal independent pedagogical activity after completing the studies. The **meanings created** by the future teachers **are supported and legitimized in various contexts**: in the relationships with significant "others" – lecturers, mentors, peer teachers. It should be noted that the role of parents or other family members becomes especially weakly expressed.

### Construction of the pedagogical experience taking over good practice

The future teachers writing the visions of their professional activity present empirically important information related to the construction of their pedagogical experience taking over good practice. The obtained results of the research have been grouped into categories and subcategories, their illustrative statements have been presented (see Table 1).

Table 1 Construction of the pedagogical experience taking over good practice

Category	Sub-category	Illustrative statements
Teacher-student relationship	Positive communication and collaboration	“I would like to communicate with students warmly and kindly, the way my beloved teacher communicated with me” (PV-7-7)
	Mutual respect and confidence	“It is important that the teacher and the student respect each other” (PV-1-8)
Organization of the educational process	Diversity of teaching/learning methods	“[...] used many methods, which help me up to now [...]” (PV-1-8)
	Freedom to choose	“The child’s freedom to choose what is relevant to him/her” (PV-2-10)
	Independence solving problems	“[...] for children themselves to think how they could solve it and choose the best option” (PV-3-17)
Teacher’s professional image	Objectivity	“The teacher’s objectivity is important” (PV-11-4)
	Proper preparation for work	“[...] where I saw the teacher, who was always ready and smart [...]” (PV-8-5)

The research has shown that future teachers writing their personal visions of professional activity reveal what good educational experience they would take over constructing particular priorities of their pedagogical activity. The informants point out that in their pedagogical activity they would pay special attention to the relationships between the participants of education, the peculiarities of the organization of the educational process, and the formation of the teacher’s professional image. The content of the school experiences of future teachers reveals that the research participants identify the importance *to establish a close and solid relationship between the teacher and the student, which is developed through a mutual desire to communicate and cooperate in the educational institution (especially in the classroom)* as an exceptional component of pedagogical professional activity. The positivity of teacher-student relationship is closely related to the peculiarities of the organization of the educational process. The future teachers point out that in the context of the organization of the educational process, the most important good practice to be communicated is related to *the teacher’s abilities to apply various teaching/learning methods*

especially the ones that encourage the learner's activeness, students' teamwork, and the integration of educational games in the educational process. The future teachers relate the teacher's professional image to the teacher's objectivity and the teacher's constant and proper preparation for work (for example, work in the classroom).

### **Reconstruction of the pedagogical experience transforming the reality of education**

In their visions of professional activity, future teachers present empirically significant knowledge about the reconstruction of the pedagogical experience they expect when the former experience is abandoned and the new experience is created. The obtained results of the research have been presented in Table 2.

*Table 2 Reconstruction of the pedagogical experience abandoning the former experience and creating the new experience*

Category	Sub-category	Illustrative statements
Reconstruction of the experience abandoning the former experience	Students' demotivation	"I would change it so that children would not be judged"(PV-20-3)
	Assessment that inhibits students' improvement	"The assessment is made but nobody is told why the assessment is like this or that, and what should be done" (PV-21-9).
Reconstruction of the experience creating the new experience	Diversity of teaching/learning methods	"I would change it bringing in some newer methods" (PV-10-2).
	Actualization of the contents of teaching/learning	"[...] take over such aspects of the organization of teaching/learning process" (PV-6-7).
	Diversity in the assessment of the educational achievements and progress	"Assess not only with tests but also by assigning creative tasks" (PV-20-8).
	Diversity of educational environments	"To look for new environments, for example, to go outside the school" (PV-12-9).

The process of the reconstruction of the pedagogical experience is the most closely related to the professional aspirations to change the educational practice giving up such a professional position of the teacher, taking which the teacher *demotivates students constantly telling them that they would not pass examinations, would not perform tests properly, etc.* At the same time the future

teachers show their denial, i.e. point out that in their professional activity they have a goal *to change the assessment of educational outcomes and progress, when the assessment becomes the instrument for punishment but not for the student's improvement*. Another aspect of the (re)construction of the pedagogical experience – *a change in the ways, in which educational achievement and progress are assessed, by abandoning testing* – is also emphasized.

The reconstruction of experience by creating the new experience is the most significantly related to the priority *to apply as various as possible teaching/learning methods and to actualize the contents of education so that knowledge gained at school would be related to the situations of everyday life*. The future teachers understand that to achieve these goals the *diversity of educational environments* is necessary, as well as *different assessment of educational achievement (e.g., through creative-project activities)*.

### **Conclusions**

Summing up, it is possible to state that the content of the relationship with significant “others”, which is mostly emphasized by future teachers in their visions of professional activity, includes motivating for the choice of the teacher's profession and the chosen pedagogical professional activity. This content is mostly expressed in the relationship of the future teachers with significant “others” – parents, other family members, and lecturers of a higher education institution. Parents, other family members, and lecturers in different ways create the conditions supporting the meanings of the pedagogical activity, important for themselves and others, constructed by the future teachers, and allow legitimizing them in different sociocultural contexts (home environment, university studies).

The content of the (re)construction of the pedagogical experience reveals which aspects of the pedagogical activity the future teachers consider as priority. Consequently, (re)constructing the experiences they have, future teachers identify the most important elements of their pedagogical activity such as the organization of the educational process using a variety of innovative educational methods, seeking to develop a different practice of the assessment of educational achievement and progress, establishing a teacher-student relationship that ensures the student's social and emotional security, motivates the student for improvement, creates the conditions for the student to be an active participant of the educational process (to make decisions, to accept responsibility, etc.).

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# RĪGAS TEHNISKĀS UNIVERSITĀTES STUDENTU KREATIVITĀTES PAŠVĒRTĒJUMA MĒRĪŠANA

## *Measuring Self-Assessment of Students' Creativity at Riga Technical University*

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**Abstract.** *The purpose of the study is to measure the creativity of students at Riga Technical University on a linear scale of self-estimation. Self-estimation of students' creativity is assessed on the basis of indicators that are points of the corresponding questionnaire. The novelty of the study is that self-esteem of creativity is considered as a latent variable, which, in the framework of the theory of latent variables, is measured on a linear scale. In the framework of this theory, based on the Rasch model, an analysis of the quality of the questionnaire as a measuring tool is carried out. Three-way analysis of variance showed that the self-estimation of creativity of students of the Architectural faculty is statistically significantly higher than the self-esteem of creativity of students of the Construction faculty. The factors of students' "gender" and "course" were noted as statistically insignificant. The results of the study should be used to analyse the quality of the educational process.*

**Keywords:** *analysis of variance, creativity, latent variable, measurement, Rasch model.*

### **Ievads**

#### **Introduction**

Straujā jauno tehnoloģiju attīstība un pastāvīgās izmaiņas ārējā vidē, ekonomiskās krīzes izraisītās problēmas prasa mūsdienu speciālistiem ātri pielāgoties mainīgajiem apstākļiem, inovatīvai domāšanai, radošā potenciāla aktivizēšanai, citiem vārdiem sakot, kreativitātes aktivizēšanai. Tas viss nosaka šī pētījuma aktualitāti.

Pirmie kreativitātes pētnieki (Guilford, 1977; Eysenk & Eysenk, 1985; Torrance, Safter, 2009 un citi) un mūsu laika zinātnieki (Mağari-Beks, 2011; Martinsone, Lasmane, & Karpova, 2016; Bebre, 2019) kreativitāti definē atšķirīgi un pat pretrunīgi, taču piekrīt, ka kreativitāte ir spēja radīt kaut ko

jaunu, oriģinālu un nebijušu. Tā ir aktivitāte, kas ved uz jaunām materiālām un garīgām vērtībām (Maģari-Beks, 2011), radošā procesa organizēšanu. Zinātniece R.Bebre (2019) kreativitāti raksturo kā sarežģītu parādību, kas saistīta ar radošu produktu, ar tā radītāju - radošu cilvēku. Vienā no savām publikācijām R.Bebre ierosina ievadīt latviešu vārdu “radošums” kā kreativitātes jēdziena latviešu analogu. Professore R. Bebre izveidoja un attīsta psiholoģijas nozari Latvijā - radošuma psiholoģiju.

Jāatzīmē, ka Latvijā tika dibināta 21.gadsimta starpdisciplinārā zinātne - kreatoloģija. Kreatoloģija ir starpdisciplināra zinātne, kas pēta dažādus radošuma aspektus kopumā (vide, personība, process, produkts, saņēmējs) un dažādos līmeņos (persona, grupa, organizācija, sabiedrība) no dažādu zinātņu viedokļa - psiholoģijas, pedagoģijas, bioloģijas, mākslas vēstures, medicīnas utt. - integrējot tos jaunrades aspektus, kas iepriekš tika pētīti atsevišķi (Bebre, Īstenā, & Roķe, 2008). Radošas personības attīstību holistiski, uzsverot pedagoga radošuma nozīmi, pētīja Dr. habil. paed. D. Lieģeniece (2003).

Šajā rakstā, lai izmērītu studentu kreativitātes potenciāla pašnovērtējumu, mēs izmantojam šīs koncepcijas formalizēšanu kā ierosināto indikatoru kopumu (Abbott, 2010). Darba mērķis ir lineārā mērogā noformulēt un izmērīt integrālo rādītāju “kreativitātes pašnovērtējums”. Šis neatņemamais rādītājs tiek izmantots, lai salīdzinātu Rīgas Tehniskā Universitātes studentus atkarībā no fakultātes, dzimuma un kursa.

### **Problēmas formulēšana** *Formulation of the problem*

Daudzu integrālo indikatoru konstruēšanas metožu (svēršanas metode, ekspertu aplēses, indeksi) ievērojamie trūkumi ir ekspertu svaru subjektivitāte un skalas nelinearitāte. Tas apgrūtina statistisko analīzes metožu izmantošanu, pieņemot lineāru mērījumu skalu. Kreativitātes pašnovērtējums ir latents mainīgais, tāpēc tā novērtēšana tiek veikta latentu mainīgo lielumu mērīšanas teorijas ietvaros, balstoties uz Rash modeļiem.

Kreatīvo pašpietiekamību nosaka operatīvi, izmantojot indikatora mainīgo lielumu kopumu (Abbott, 2010). Katrs indikators raksturo vienu no radošuma, pašpietiekamības aspektiem.

Studenti novērtē savas piekrišanas pakāpi ar anketas punktiem (indikatoriem) piecu punktu Likerta skalā: 1 - pilnīgi piekrītu; 2 - piekrītu; 3 - ne jā, ne nē; 4 - nepiekrītu; 5 - pilnīgi nepiekrītu.

## **Pētījuma metodika un organizācija** ***Methodology and organization of research***

Pētījuma piedalījās 308 respondenti, kas bija Rīgas Tehniskās Universitātes divu fakultāšu studenti, no kuriem 255 studenti pārstāv Būvniecības inženierzinātņu fakultāti, 53 studenti – Arhitektūras fakultāti. Pēc dzimuma izlases struktūra ir šāda: 209 zēni un 99 meitenes. Aptaujā piedalījās 171 pirmā kursa students, 25 otrā kursa studenti, 79 trešā kursa studenti un 22 ceturtā kursa studenti, kā arī 11 maģistranti.

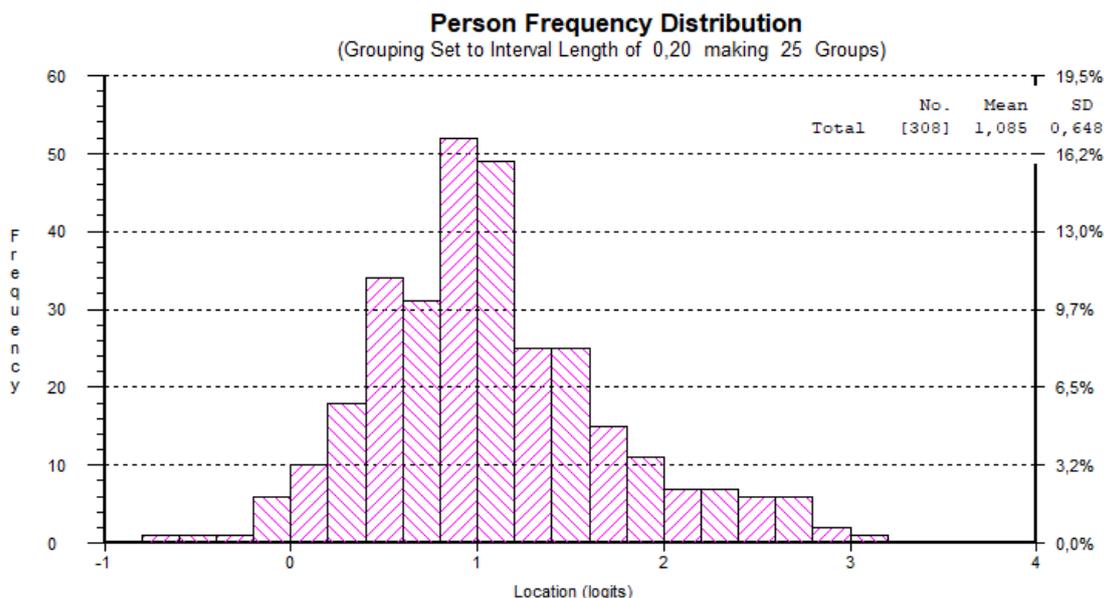
Kreativitātes pašnovērtējums tika mērīts latentu mainīgo teorijas ietvaros, pamatojoties uz Rasch modeli. Šī teorija ir labi pierādīta gan izglītības pētījumos, gan citās sociālajās sistēmās pētījumos (Maslak, Karabatsos, Anisimova, & Osipov, 2005; Leus & Maslak, 2018; Maslak & Pozdniakov, 2018; Maslak, 2019a). Turklāt šīs teorijas ietvaros veiktā imitācijas modelēšana parādīja latentu mainīgā mērījuma pieņemamu precizitāti (Maslak, Moiseev, & Nasonova, 2018; Maslak, 2019b).

## **Pētījuma rezultāti** ***Results***

Aptaujas rezultātu apstrādei tika izmantota dialoga sistēma RUMM2020 (Andrich, 2005). Primārais uzdevums, kas rodas, mērot latentu mainīgo lielumu, ir novērtēt anketas kā mērīšanas līdzekļa kvalitāti, rādītāju kopas kvalitāti. Faktiski tiek novērtēta Rasch mērīšanas modeļa aptaujas rezultātu piemērotība. Šim nolūkam tika izmantots kritērijs  $\chi^2$ . Statistikas  $\chi^2$  vērtība izrādījās vienāda ar 64,27 ar brīvības pakāpju skaitu 56.

Kritērija  $\chi^2$  nozīmības empīriskais līmenis ir 0,21, kas norāda uz indikatoru kopas savietojamību un attiecīgi apsekojama rezultātu piemērotību mērījumiem. To, ka studenti ievērojami atšķiras viens no otra izmērītajā latentajā mainīgajā, pierāda lielā indivīdu diferenciācijas indeksa vērtība, kas ir vienāda ar 0,85. Studentu kreativitātes novērtējumu izvietojums ir parādīts 1.attēlā.

Novērtēsim iegūtos mērījumu rezultātus. Šeit *persons* atbilst studentiem. Pirmkārt, no 1.att. jāatzīmē diezgan lielu kreativitātes pašnovērtējuma variāciju diapazonu - 4 logit (no -1,0 līdz +3,0 logit). Slēpto mainīgo teorijas ietvaros jebkurš latentais mainīgais tiek mērīts logos. Logitāšu semantiskais saturs un mērīšanas procedūras ir apskatītas (Rasch, 1960; Engelhard, 2013; Bond & Fox, 2015). Tik plašs vērtējumu variāciju diapazons norāda, ka studenti pēc kreativitātes ievērojami atšķiras. Turklāt, kā varētu gaidīt, studentu vērtējumu sadalījums ir tuvs normālajam līmenim (gandrīz visi personības indikatori tiek sadalīti pēc šī rādītāja).



*1.attēls. Studentu kreativitātes pašnovērtējums  
Figure 1 Students' creativity self-estimation*

Interesanti ir indikatoru vērtējumi, kurus mēra tādā pašā skalā kā studentu vērtējumus - kreativitātes skalā. Indikatoru statistiskie parametri ir parādīti 1.tabulā.

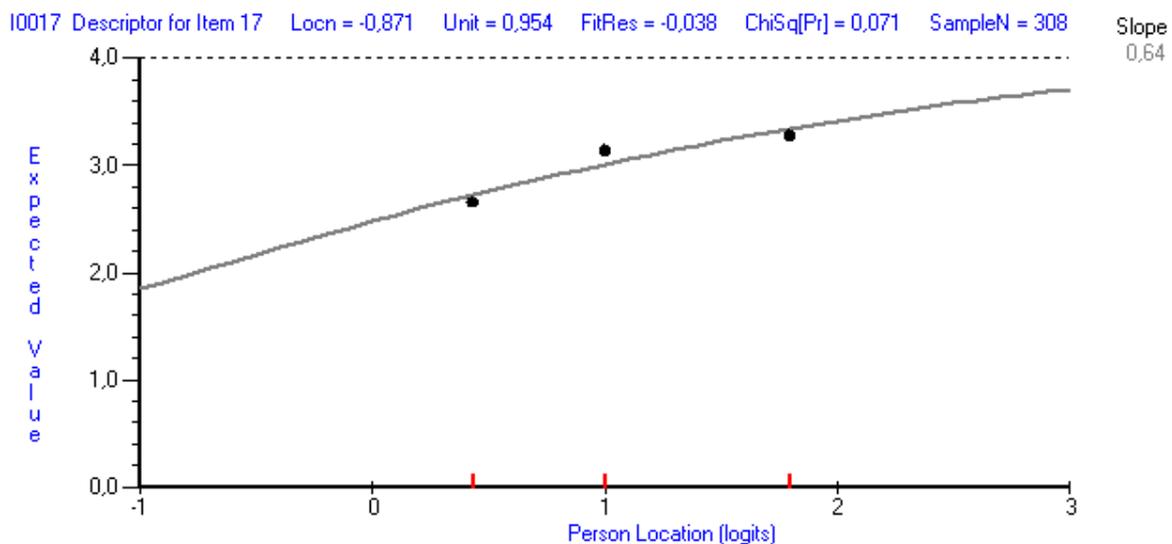
*1.tabula. Indikatoru statistiskais raksturojums  
Table 1 Statistical characteristics of indicators*

Indikatora numurs	Vērtējums (logit)	Standarta kļūda (logit)	Statistikas $\chi^2$	$\chi^2$ nozīmības statistiskais līmenis
17	-0,871	0,084	5,466	0,243
4	-0,796	0,081	1,446	0,836
19	-0,779	0,083	3,664	0,453
1	-0,725	0,082	3,327	0,505
2	-0,650	0,091	1,745	0,783
3	-0,571	0,085	1,585	0,811
6	-0,509	0,082	3,556	0,469
18	-0,274	0,080	5,222	0,265
20	-0,166	0,077	4,347	0,361
8	-0,025	0,082	4,043	0,400
7	0,007	0,070	1,209	0,877
14	0,016	0,076	6,680	0,154
9	0,047	0,072	4,703	0,319
22	0,074	0,076	6,398	0,171
5	0,125	0,080	11,143	0,025
11	0,207	0,063	3,517	0,475
25	0,210	0,073	6,462	0,167

16	0,244	0,077	1,814	0,770
24	0,336	0,072	4,145	0,387
28	0,345	0,069	8,669	0,070
12	0,369	0,073	11,303	0,023
21	0,379	0,076	7,840	0,098
27	0,387	0,070	1,886	0,757
23	0,439	0,075	4,522	0,340
10	0,463	0,067	0,747	0,945
15	0,564	0,070	3,479	0,481
13	0,565	0,072	2,286	0,683
26	0,589	0,072	6,600	0,159

Pirmkārt, jāatzīmē, ka  $\chi^2$  statistikas nozīmīguma līmenis visiem indikatoriem ir lielāks par 0,01. Tas nozīmē, ka visi indikatori ir savietojami ar Rash modeli, un šo indikatoru komplektu var izmantot kā mērīšanas instrumentu.

Šajā tabulā indikatori ir sakārtoti to vērtējuma pieaugošā secībā kreativitātes skalā. Izrādījās, ka 17.rādītājam ir viszemākais vērtējums: “Vai jūs cenšaties saprast, ko vēlaties studēt?” Ar rezultātu -0,781 logit. Tas nozīmē, ka 17. rādītājs labāk nekā citi atšķir studentus ar zemu kreativitātes pašnovērtējumu. Šī indikatora raksturīgā līkne ir parādīta 2.attēlā.



2.attēls. 17. indikatora raksturīgā līkne “Vai jūs mēģināt saprast, ko vēlaties studēt?”  
 Figure 2 Characteristic curve of indicator 17 “Are you trying to comprehend what you want to study?”

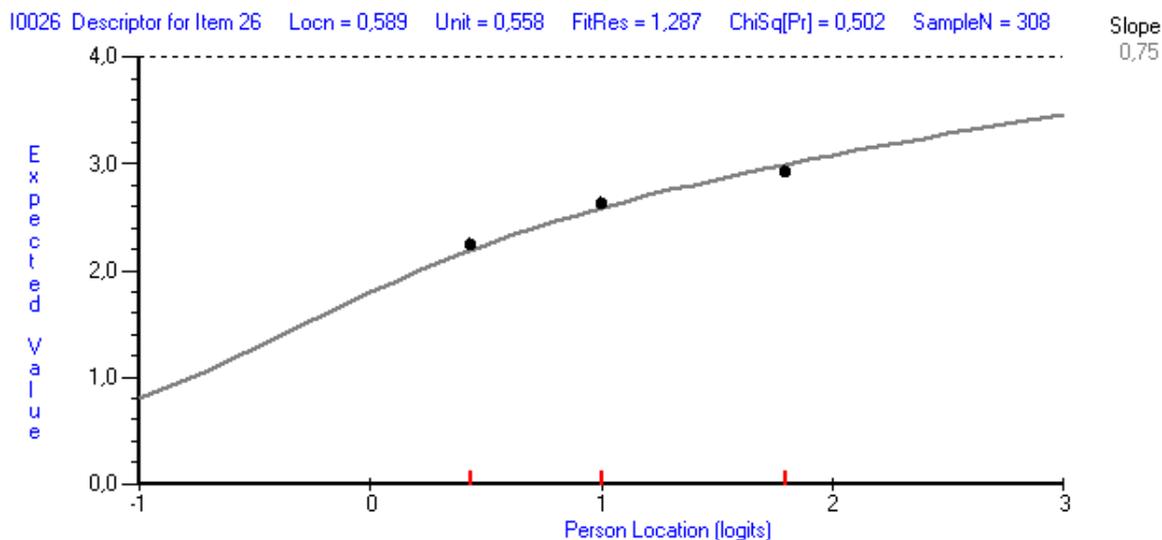
Zīmējumiem ar raksturīgām līknēm ir šāda struktūra. Uz abscisas ass ir parādītas latentās mainīgās vērtības, šajā gadījumā “studentu kreativitātes pašnovērtējums”. Šis latentais mainīgais, tāpat kā jebkurš cits latentais mainīgais

latento mainīgo teorijā tiek mērīts logitos. Uz ordinātu ass ir parādītas attiecīgā indikatora vērtības. Šajā pētījumā indikatora vērtība atbilstoši anketas struktūrai svārstās no 0 līdz 4. Ar punktiem 2.attēlā parādītas latentā mainīgā lieluma vidējās vērtības studentiem ar zemu, vidēju un augstu kreativitātes pašnovērtējuma līmeni.

Attēla augšdaļā ir šāda informācija:

- I0017 - indikatora sērijas numurs;
- 17.indikators - indikatora nosaukums, kuru pēc noklusējuma piešķīrusi dialoga sistēma;
- Locn = -0,871 - indikatora atrašanās vieta "studentu kreativitātes pašnovērtējums" skalā.

Pārējie indikatori, kas raksturo mērīšanas modeļa indikatoru adekvātumu, šajā kontekstā netiek ņemti vērā. Ir arī interese par indikatoru, kurš labāk par citiem atšķir studentus ar augstu kreativitātes pašnovērtējumu. Kā redzams no 1. tabulas, tas ir 26.indikators "Vai jums ir prieks par idejām, kuras ir pārņemtas no citiem?" ar vērtējumu 0,589 logit (3.att.).



3.attēls. 26. indikatora raksturlīkne "Vai Jūs izjūtāt prieku, pārņemot idejas no citiem autoriem?"

Figure 3 Characteristic curve of indicator 26 "Are you happy with other ideas that have been taken over from others?"

Abas raksturlīknes izrādījās līdzīgas, tas ir saistīts ar nelielu rādītāju variāciju diapazonu. Tomēr, kā minēts iepriekš, šis indikatoru kopums labi diferencē studentus pēc viņu kreativitātes vērtējuma.

### Mērījumu rezultātu analīze Analysis of measurement results

Tā kā pētītie faktori – studentu dzimums, fakultātes, kurss - ir kvalitatīvi, tad par statistiskās apstrādes metodi tiek izvēlēta dispersijas analīze. Mērījumu rezultātu aprēķini tika parādīti trīsfaktoru dispersijas analīzes lineārā modeļa veidā (2.tabula).

*2.tabula. Trīs faktoru studentu kreativitātes pašnovērtējuma dispersijas analīzes rezultāti*  
 Table 2 Results of three-factor analysis of variance of students' self-estimation of creativity

Dispersijas avots	Kvadrātu summa	Brīvības pakāpe	Vidējais kvadrāts	Feksp	p
Fakultāte	3,168	1	3,168	7,724	0,006
Dzimums	0,002	1	0,002	0,004	0,948
Kurss	3,021	4	0,755	1,842	0,121
Kļūda	123,443	301	0,410		
Kopā	128,815	307			

Dispersijas analīzes rezultāti (2.tabula) liecina, ka statistiski nozīmīgs, turklāt ļoti augstā nozīmīguma līmenī, ir faktors “fakultāte”,  $p = 0,006$ . Šī faktora līmeņu vērtības ir norādītas 3.tabulā.

*3.tabula. Studentu kreativitātes pašvērtējums atkarībā no fakultātes*  
 Table 3 Self-estimation of students' creativity depending on the faculty

Fakultāte	Latentā mainīgā novērtējums (logit)	Standarta kļūda (logit)	95% ticamības intervāls	
			Apakšējā robeža	Augšējā robeža
Būvniecības	1,074	0,064	0,948	1,200
Arhitektūras	1,402	0,117	1,173	1,632

No 3.tabulas secinām, ka arhitektūras fakultātes studentu vidējais radošuma pašnovērtējums (1,402 logit) ir statistiski nozīmīgi augstāks nekā Būvniecības fakultātes studentu vērtējums (1,072 logit). Faktori “dzimums” un “kurss” ir statistiski nenožīmīgi, tomēr pārstāv interesi par to vidējām vērtībām (attiecīgi 4. un 5. tabula).

*4.tabula. Studentu kreativitātes pašvērtējums atkarībā no dzimuma*  
 Table 4 Self-estimation of students' creativity by gender

Dzimums	Latentā mainīgā novērtējums (logit)	Standarta kļūda (logit)	95% ticamības intervāls	
			Apakšējā robeža	Augšējā robeža
Jaunieši	1,235	0,084	1,070	1,401
Meitenes	1,241	0,087	1,069	1,413

No 4.tabulas secinām, ka meitenēm vidēji vērtēšanas ir nedaudz augstākas (1,241 logit) nekā jauniešiem (1,235 logit), bet šī atšķirība ir statistiski nenozīmīga.

5.tabula. *Studentu kreativitātes pašvērtējums atkarībā no kursa*  
 Table 5 *Self-estimation of students' creativity depending on the course*

Kurss	Latentā mainīgā novērtējums (logit)	Standarta kļūda (logit)	95% ticamības intervāls	
			Apakšējā robeža	Augšējā robeža
Pirmais	1,111	0,053	1,007	1,215
Otrais	1,362	0,139	1,090	1,635
Trešais	1,330	0,090	1,153	1,506
Ceturtais	1,133	0,147	0,844	1,422
Maģistranti	1,256	0,200	0,861	1,650

Kā jau tika minēts iepriekš, faktors “kurss” ir nenozīmīgs. Tomēr jāatzīmē, ka otrajam un trešajam kursiem pašnovērtējums ir nedaudz augstāks nekā pārējiem kursiem.

### **Secinājumi** *Conclusions*

Pētījumā ir apzināti un analizēti indikatori, kas nosaka studentu kreativitātes pašnovērtējumu, kas tiek uzskatīta par latentu mainīgo. Lai sasniegtu pētījuma mērķi, saskaņā ar latentu mainīgo teoriju, tika atrisināti šādi uzdevumi: veikta anketu kvalitātes analīze; mērīts uz lineārās skalas Rīgas Tehniskās universitātes Būvniecības un Arhitektūras fakultāšu studentu kreativitātes pašnovērtējums; identificēti indikatori, kas nosaka studentu kreativitātes pašnovērtējumu. Dispersijas analīze parādīja, ka meiteņu kreativitātes pašnovērtējums statistiski ir augstāks, nekā zēniem ļoti augstā nozīmīguma līmenī 0,01. Studentu pašvērtējums nav atkarīgs no kursa, kur viņi mācās.

Pētījuma rezultāti labi saskan ar studentu (kuri piedalījās aptaujā) akadēmiskiem sasniegumiem. Ņemot vērā kreativitātes nozīmi mūsdienu pasaulē, kā arī to, ka izglītība koncentrējas uz mācību rezultātu novērtēšanu, kompetenču novērtēšanu, šāda veida pētījumi palīdz objektīvi novērtēt studentu personisko īpašību attīstības līmeni.

Jāatzīmē arī, ka kreativitātes pašnovērtējums tiek noteikts operatīvi, izmantojot indikatoru kopumu. Izmantotos indikatorus var pielāgot un tādējādi izskaidrot jēdziena “kreativitātes pašnovērtējums” nozīmi. Iegūtie rezultāti jāizmanto izglītības procesa kvalitātes analīzei.

### Summary

A linear scale of Riga Technical University students' self-estimation of creativity is formed in the study. Self-estimation of students' creativity is assessed on the basis of indicators that are points of the corresponding questionnaire. The novelty of the study is that self-esteem of creativity is considered as a latent variable, which, in the framework of the theory of latent variables, is measured on a linear scale. In the framework of this theory, based on the Rasch model, analysis is made with the questionnaire serves as a measuring tool. The analysis identified indicators that differentiate students with low and high levels of creativity's self-estimation. Students' self-estimation factors were investigated. Three-way analysis of variance showed that the self-estimation of creativity of the students in the Architectural faculty is statistically significantly higher than the self-estimation of creativity of students of the Construction faculty. The factors of students' "gender" and "course" of were noted as statistically insignificant; that is, self-estimation of students' creativity does not depend on gender and course. The results of the study should be used to analyse the quality of the educational process.

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## **MODERN SOCIETY BUILDING THROUGH HIGHER EDUCATION IN LITHUANIAN AFTER 1918**

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***Abstract.** The development of the modern state of Lithuania after the declaration of independence on February 16<sup>th</sup>, 1918 triggered many changes both in the development of the state and processes related to modern society building. Education and the opening of modern university in Lithuania was closely related to historical, social and political changes. The occupation of Vilnius and the transfer of the most important state governing and state developing institutions to Kaunas as the temporary capital of Lithuania was closely related to the establishment of Lithuanian University in Kaunas in 1922. The society was also impacted by the socio-historical context since some members of the society took an active part processes of the emergence of the Lithuanian University as the establishment of modern system of higher education in Lithuania. Taking into consideration not only the historical context and the approaching celebration of one hundred years of the opening of modern Lithuanian University in Kaunas in 2022, this article aims to discuss processes, factors and context that made prerequisites for the development of modern university in Lithuania in Kaunas in 1922 that, in turn, influenced the development of modern society and nation with a specific focus on its identity.*

***Keywords:** identity, higher education, Lithuanianess, modern society, university.*

### **Introduction**

In 2018 Lithuania celebrated 100 years of its existence as an independent, democratic state. Emerging in the world as a new modern and democratic republic it had to spread news about itself to the remaining world. The state was recognized as an independent and modern state only in the 20<sup>th</sup> century. Through its experience and past inheritance, the Lithuanian state needed to construct its identity to itself and (re)present its identity to the outer world. The state with a predominant nation was at the same time representing multiculturalism and other nations, thus, it was / has been looking for the core and boundaries of its identity.

Taking into consideration the socio-historical context mentioned above this type of research is relevant and important to systematically recapture past events related to the development of modern society and higher education and understand

how past events have impacted and shaped current processes, self-perception of the society and patterns that exist in current Lithuania as well as the system of higher education (HE) and education in a young and newly emerging state. On the other hand, this type of social historical research might be interesting to other researchers interested in conducting a comparative research on how modern education system and society developed during state and nation building processes due to the fact that similar processes took place in many European countries (Estonia, Finland, Latvia, Poland and other) at the beginning of the 20<sup>th</sup> century. Moreover, the approaching jubilee to commemorate one hundred years of the establishment of modern Lithuanian University in Kaunas in 2022 requires to draw attention to the rudiments of the modern educational establishment of higher education in Lithuania and Kaunas city as well as the importance of the event that had and still have strong impact on the development of the state, society and Kaunas city in general.

During state-building and development processes the society needed educated people. Intellectuals and members of government developed as personalities and were educated abroad in foreign universities in the previous epoch. However patriotic feelings brought them back to Lithuania with an aim to devote their potential to develop the new modern state and society as well as disseminate new ideas. The same trend has been observed during other historical periods and epochs when representatives of the generation adjusted to and took active parts to establish and develop the system of education in Lithuania. A newly established modern state University in Kaunas during the first period of the Lithuanian statehood (1918-1939) has become the cradle of thinkers and developers of new standards of the modern society (Veilentienė, 2011; Zabarskaitė, 2017). The representatives committed to and contributed to the implementation of state building and development strategies. Education was one of strategic priorities of that time and education related state policy was put into practice through the development of institutions of higher education and orientation of the society towards education through teacher training.

Education related policy was also closely related to the state language related policy. During the period of the first independence the Lithuanian language was officially granted the status of the state language for the first time and became a tool to represent and consolidate both the state and the society as well as entrench the elements of patriotism. At the same time the establishment of the Lithuanian language as the state language made prerequisites for capturing language policy in terms of the use of other ethnic languages that were also granted particular status in terms of education, legislation and other spheres of life. Translation of documents, books, information leaflets from the Lithuanian language to the predominant business and tourism related languages such as English, German,

French or Russian served as a means to construct and express Lithuanian identity, i.e. Lithuanianess.

Taking all that has been mentioned above, this research / article aims at analysing how identity and development of the modern society and its Lithuanianess was constructed and entrenched through processes of establishing modern higher education institutions, i.e. Lithuanian University that was opened in Kaunas in 1922. The research into people and society, its social and demographic composition, qualification and education is of the utmost importance due to the fact that society and people is the most important resources of every state as well as the background of the state's economic capacity (Vaitekūnas, 2002). The research also introduces state-building processes through the establishment and development of higher education which, in turn, made prerequisites for the modern state and society of Lithuania to become equal to other states of Europe and / or the world. Tasks, experience and insights of the state policy of the first independent Republic of Lithuania might serve as guidelines in other state development processes and could be compared with other state transformations after the period of one hundred years from 1918 till 2018. Since his type of research is based on the reconstruction of historical context, it is methodologically underpinned by historical-descriptive approach and primary data (sources) analysis (documents, laws, orders and other data in archives and libraries).

### **Methodology of the research**

This research and paper focuses on a particular case study, i.e. the establishment and development of modern University in Lithuania and its impact on state and nation building processes and the development of Lithuanianess during the period of the first independence of Lithuania from 1918 till 1939. The article employs historiographic data analysis and historical, descriptive and reconstructive approaches. The social historical research as a research method which offers theoretical explanations of past historical events that influence the present turn of events was described in publications of Hamilton (1993), McDowell (2002), Leedy and Ormrod (2005) and other is appropriate due to the fact that a theoretical understanding theoretical is essential, but is not sufficient for an understanding of the educational system. This, as Fend states, also requires a historical perspective on the origins of “institutional actors in human design” (Fend, 2006, p. 11).

Research, related to the analysis of historical context and especially state building processes in terms of language policy, education and other was studied in Latvia by Veisbergs (2009, 2016, 2018), and Monticelli and Lange in Estonia (2014), Amirejibi-Mulen in Gegorgia (2011) and other. Similar type of research

in Lithuania, though rather fragmented, was published by Vaitekūnas (2002), Veilentienė (2011), Zabarskaitė (2017) and other.

Seeking to reconstruct the context and events of the past that have influence on the present system of HE, authentic historical data and primary sources, various documents (the Statute of the Lithuanian University, Regulations and accounting documents of the University in Lithuania) that are related to the foundation and development of the Lithuanian University and are available at scarce edition funds at the library of Kaunas University of Technology as well as different laws, orders of ministers and various articles and publications, available in archives of the Legal Documents at the Seimas of the Republic of Lithuania, the Register of Legal Acts, the Universal Lithuanian Encyclopaedia and the Virtual Electronic Heritage System have been examined.

The authors of this article ground the idea of this particular research on the conception of education as a key factor to have a strong impact on language policy as well as modern society and state building processes. Subscribing to the point of view of researcher Knabe (2000), the development of public and modern education is perceived as part of the broader nation and state building process, identified through modernization, industrialization, homogenization and secularization of the society. Whereas the understanding of modernism and modern society is conceived through the understanding of nationalism and national identity on the basis of which modern states emerged at the beginning of the twentieth century. Development of the state, nation and nationalism is underpinned by modernism. Nationalism and strong promotion of national identity by means of language and culture encourages societies to rediscover the appropriate past which, in turn, moves the society towards the nations of modernity (Smith 1998, pp. 159-165).

### **Historical context**

The establishment of the modern state after the declaration of the independence of the Republic of Lithuania in 1918 triggered the development of modern University in Lithuania where education was considered as one of strategic priorities in the development of the state and nation building. Vilnius University, established by Jesuit order in Vilnius in 1579, was closed by the order of Tsar Nikolaj after the rebellion in 1831 since it was considered as the cradle of national power and the source of literacy and light that was used to form the educated society (Rūgytė, 1979). However soon after the declaration of the independence of Lithuania in 1918, Vilnius was occupied by Poland (1919-1939) and Vilnius University became a Polish university where all subjects were delivered in Polish.

During the period of Vilnius occupation, the most important institutions of state government, i.e. the President's Office, ministries and other were moved to Kaunas and the city became the temporary capital of Lithuania and the most significant centre of culture and education of those days. Within circumstances of difficult historical period the leaders of the state as well as members of the society understood the need to educate the society, thus on January 27, 1920 Higher Courses that had the status of the private higher educational establishment were founded in Kaunas. The vision of founders of Higher Courses was related with the idea of developing Lithuanian system of higher education that would bring the society towards the independence of the mind and would raise self-esteem and pride of Lithuanian citizens through research, education and culture by means of the native tongue, i.e. the Lithuanian language.

It is interesting to note that the state at that period was politically and economically constrained, however, the society understood the importance of education and leaders encouraged people to learn, get educated and aim for education (Lithuanian University, 1922). The newly established state lacked and felt a great demand for teachers, doctors, officials, lawyers, and civil servants who could work in different institutions of public governance to be trained in Lithuania. Thus, the first strategic priority was to develop and establish compulsory primary education and the second one was related to the foundation of the state university that would become not only the center of excellence, research and studies but also the source of Lithuanianess and Lithuanian national identity to further collect and gather society, develop Lithuanian elite of broad and universal competences. Therefore, representatives of the society, understanding the significance of having educated society, donated money to the establishment of Higher Courses in Kaunas (Veilentienė, 2011). When the opening of Higher Courses was announced in a newspaper and citizens were invited to enter the courses, 300 hundred people expressed a wish to study in one day.

Higher Courses served as the basis for the foundation of the University in Kaunas. After two years on February 16, 1922 the Lithuanian University as the first modern university in Lithuania was established in Kaunas. Initially the university was composed of six faculties, i.e. the Faculty of Theology and Philosophy, the Faculty of Humanities, the Faculty of Mathematics and Natural Sciences, the Faculty of Medicine, the Faculty of Law, and the Faculty of Technical Sciences that was structured of 4 departments, i.e. the Department of Electrical Engineering, the Department of Mechanics, the Department of Chemistry and the Department of Civil Engineering (The Statute of the University 1922; Veilentienė, 2011). The Statute of the Lithuanian University was approved by the Lithuanian Government in 1922 and was amended in 1930 and 1937. Interestingly enough, the establishment and functioning of the Lithuanian

University was described in the article about the development of state university in Kaunas by Oskar v. Büchler in the journal *Osteuropa. Zeitschrift für die gesamten Fragen Osteuropas* in 1928. The author presented historical-political context of the state and the historical development of the modern state university in Kaunas alongside other academic, research, studies and financial issues (Büchler, 1928, pp. 20-30).

Many prominent leaders, writers, poets, ministers, lawyers and doctors became teachers at the University of Lithuania. In addition to this many well-known figures of the society who acquired their education abroad, i.e. in Universities in St. Petersburg, Tartu, Tomsk, Kharkov, Odessa, Krakow, Berlin, Leipzig, Missouri, Yale, Maryland, Riga and other (Raudonikis, 1933), came back to the independent state to contribute to the nation and nation building processes with an aim to share their experience and knowledge gained abroad. Many members of diaspora also donated money and books to the newly established institution of higher education in Kaunas. In 1930 the University of Lithuania was renamed Vytautas Magnus University and carried out its activity till the outbreak of the second world war. The University of Lithuania became the foundation of currently performing state universities in Kaunas, i.e. Kaunas University of Technology, Vytautas Magnus University, the Lithuanian University of Health Sciences and the Academy of Agriculture.

### **The University as the Cradle of Lithuanianess and the Lithuanian elite**

The modern state of Lithuania was re-established in 1918 in the spirit and the movement of *the Spring of Nations*, a socio-political shift in Europe that appeared after the revolutions of 1848 and revived the feelings of nationalism, national pride and identity as well as stipulated the emergence of the national language. Members of the new elite were supporters of “linguistic Lithuanian nationalism” (Snyder, 2003, p. 36) and supported the idea of developing national identity-based society. This laid the foundation for the modern national Lithuanian movement, which triggered the development and establishment of the modern state of Lithuania in 1918. The modern state of Lithuania was established within the territory where the Lithuanian language was prevailing and spoken, the status of the Lithuanian language as the official state language had to be fixed. It is significant to note that Lithuanian had never been established as a state language in the history of Lithuania before 1918. Only after the declaration of the independence of the Republic of Lithuania, the Lithuanian language was officially defined as the state language in legal documents of the Lithuanian government. The first Lithuanian Constitution, approved on August 1, 1922 determined Lithuanian as the state language and the use of local languages (as stated by the Constitution with no specific mention of languages) was regulated by the law

(Lithuanian constitution, 1922). The first Constitution regulated the use of the Lithuanian language in official settings however described when other ethnic languages could be used alongside Lithuanian.

The newly established University of Lithuania promoted and also aimed to entrench the use of the Lithuanian language in all spheres of social and academic life due to the fact that Lithuanianess and national identity in those days was perceived through the revival, significance and the emergence of the Lithuanian language as the state and national language. At the same time, it was obvious that due to the status of Lithuanian as non-state language until 1918, not every member of the society spoke proper or standard Lithuanian. Hence the authorities and prominent leaders of both Higher Courses and the University of Lithuania perceived the need to teach the society and members of the academic elite the proper Lithuanian language as the core to perceive self-identity, newly formed state, culture, art and modernity of the society.

The Statute of the University of Lithuania, approved in 1922 and published in 1923, was printed in Lithuanian with a translation in English taking into account the fact that large Lithuanian diaspora resided in the United States. The Statute of the University defined that studies at the University are organised in the state language, except in those cases when delivered subjects required the use of other languages, for example, when foreign languages or Theology was taught (Raudonikis, 1933, p. 139). All professors were supposed to speak and use the standard Lithuanian language, however, the University's Council could make some exceptions by allowing some professors to temporarily teach in other languages. At the same time the Report about the Performance of the University indicated that the Faculty's Council could select and appoint as young research fellows only those staff members who could deliver their subjects in the Lithuanian language. Exceptions could be made only to language professors lecturers (Raudonikis, 1933, p. 501).

The majority of students, i.e. 67.4% were of Lithuanian origin. Yet, around 32% of students were non-Lithuanians, i.e. representatives of Lithuanian local minorities, i.e. 26.2 % of Jewish, 2.5 % of Polish, 1.6 % of Russian and other ethnic groups (Raudonikis, 1933, p.399). Both foreigners and representatives of local minorities were admitted and could study at the University of Lithuania, however they were supposed to pass an entrance examination of the Lithuanian language and submit all documents with translations into Lithuanian. If the proficiency of the Lithuanian language of the entrants (both non-Lithuanians and Lithuanians) was insufficient, students were granted possibilities to improve their Lithuanian language skills by a special decision of the Senate to postpone the examination of the Lithuanian language till they can demonstrate sufficient linguistic competence in the Lithuanian language, necessary for further studies at

the University. However, in the fifth semester of their studies students were required to have perfect Lithuanian language skills.

At the same time studies of other foreign languages were promoted and after the fifth semester students had to pass an examination of another foreign language and demonstrate good knowledge of it especially in their professional fields and major studies. Purposeful inclusion of foreign languages as subjects in study programmes and curricula demonstrate the pragmatic attitude of the founders of the modern University, i.e. to disseminate news about the state, research, innovations, science and culture to the rest of the world as well as provide possibilities to young students and researchers to become an integral part of the global academic world. The resources and study materials were provided to students with an aim to get the latest news of specific research areas. Professors and researchers were also active in publishing Lithuanian course books and study materials. Funds of the library at the University demonstrate that alongside Lithuanian publications that made up 64%, literature in German (17%), Russian (14%), Polish (2%), Latin (1.3%), English (1.2%), French (0.7%) and other (Jewish, Latvian, Ukrainian, Italian) was available (Raudonikis, 1933, p. 307). The functioning of the library of the University of Lithuania corresponded with aims and mission of the University to contribute to the development and education of academic community and society in general. In such a way standards of European research and studies in the Lithuanian language began to form.

The teaching staff and researchers of the newly established university took active part in research activities with an aim to develop and spread the latest trends and innovations of science in the Lithuanian language. This was the direct way to develop Lithuanian researchers and scientists, however at the same time there was a requirement to publish doctoral thesis in the state language. The Statute regulated that all dissertations had to be written in Lithuanian except for those in the fields of Humanities and Theology, where Latin was allowed. Sometimes a special exception was made to publish and defend dissertations in another language by the decision of the Faculty (Raudonikis, 1933). The facts indicated above demonstrate that the authorities of the University of Lithuania not only encourage the use of the state language in academic and research fields but also contributed to the development of academic language in Lithuanian. Many researchers and scientists became developers of their research field terms and terminology in Lithuanian.

The State University of Lithuania in addition to research and studies provided possibilities to both students and teachers to develop talents and intellectual potential of the academic community through the establishment of various organizations, supported by the state and private initiatives. Members of various research, scientific, artistic and sports organizations carried out public, social and cultural activities that fostered patriotic and national feelings as well as

raised national identity based spirit and cultural and artistic sophistication. Representatives of local ethnic minorities, i.e. Jewish, Polish, Russian, German, Latvian or other could also create their organizations to take care of academic or their culture related issues (Raudonikis, 1933, pp. 481-482). However, all documentation, reports and regulations of those groups should have been taken and recorded in the state language, i.e. Lithuanian. It is interesting to note that the University financially supported students in their academic and non-academic activities by means of granting scholarships, yet only students who had Lithuanian citizenship were eligible candidates for student scholarships with an aim to encourage studies of Lithuanian residents.

The foundation of the University of Lithuania also had an impact on the development of socio-cultural life in Kaunas as a modern city. Taking into consideration the fact that many prominent members of the society and the elite returned to Lithuania after their studies abroad, the theatre and other institutions as places to spread news about Lithuanian identity, Lithuanianess emerged. Thus, during a short time frame a modern state and a gradually modernizing society, open to the rest of the world, formed. The values that entrenched during the period of the existence of the first modern state of the Republic of Lithuania since 1918 till 1940 were sustainable during the period of the occupation and are still viable, visible and felt in the society and the Republic of Lithuania after the regain of the second independence as the core to perceive modern Lithuanian identity.

### **Conclusions**

The analysis of the beginning of the 20th century opens a historical retrospective that enables to examine, view and compare social challenges that the newly developed state of Lithuania faced with. The formation of its own statehood, Lithuanian identity based society and the emergence of the elite was strongly linked with the establishment of the first modern Lithuanian University in Kaunas. Decisions and initiatives taken were and are still directly related to the common idea and a clear vision related to the future development of the modern state of Lithuania and sustainability of the modern society.

The research and analysis of historical data indicates that the newly founded Republic of Lithuania, as a fully-fledged country of European cultural space, striving for the global recognition, needed its own university as an institution to educate, train and bring together the scientific, political and cultural elite of society. In the early stages of the development of the modern statehood, there was a need for at least one higher educational institution that would take responsibility in the education of young people and highly qualified citizens who could help to build the state. The foundation and the performance of the University of Lithuania

as well as activities of the academic community, i.e. scholars and students, made the newly established country known to the rest of the world.

The emerging academic elite contributed to the development of the intellectual power of the emerging modern Lithuanian society that was responsible for its ideas and decisions to the rest of society. The University gained a high degree of authority in Lithuanian society, and studies there became an attractive prospect not only for city citizens but also members of the society coming from different regions. The university was also open to local ethnic minorities that could acquire qualified knowledge and be directly involved in the management of state and public affairs. The inclusion of ethnic minorities into all spheres of state functioning affected the development of modern, tolerant and open society. The first state university founded in 1922, became the symbol and the centre of science, culture and public education with the core values that are viable and sustainable in the present Lithuanian society.

Finally, after the declaration of the first independence of the state, Lithuania experienced the turn becoming free as a state. In the creation of statehood and its consolidation the direct connection between nation, state, language and education is of key significance. And similar processes that Lithuania experienced during the historical period that has been discussed in this paper can be observed after the declaration of the second independence of the state of Lithuania in 1990, however the comparative analysis of processes then and now might be discussed in future research.

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## О ГОТОВНОСТИ СТУДЕНТОВ ПЕРВОГО КУРСА К ПРОЕКТНО-ОРИЕНТИРОВАННОМУ ОБУЧЕНИЮ В ВУЗЕ

### *On The Readiness of First-Year Students For Project-ORIENTED Training in Higher Education*

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**Abstract.** *The training of a graduate with project thinking is one of the trends in modern higher education. Specialist with soft skills is in demand by society. The formation of soft skills is facilitated by using project technologies in training. In this regard, it seems important to identify the level of readiness of freshmen to project-oriented training.*

*The purpose of this article is to analyze the readiness of first-year students of the Institute of Mathematical Modeling and Game Practice of Pskov State University for project-oriented study at a university. The research used the following methods: analysis of the scientific literature on the research problem, observation, expert evaluation, questioning, and statistical analysis of the results. In the process of research, (a) the need for an input assessment of freshmen readiness for project activities was substantiated, (b) the components of students' readiness for project-oriented training were identified, (c) the selected components were evaluated during the training project carried out by freshmen, (d) the results were analyzed.*

**Keywords:** *higher education, input assessment, project-based learning, readiness for project activities.*

### **Введение** **Introduction**

Одним из трендов современного высшего образования является подготовка выпускника с проектным мышлением. Обществом востребованы специалисты с soft skills, формированию которых

способствует обучению с использованием проектных технологий. Проектное обучение – это ориентированная на студента форма обучения, в которой обучение зависит от контекста, учащиеся активно участвуют в учебном процессе. Работа над проектом осуществляется совместно, все участники должны вносить свой вклад в общий результат, она содержит элементы обучения на основе опыта с активным осмыслением и сознательным вовлечением (Helle, Tynjälä, & Olkinuora, 2006). Студенты учатся быть уверенными в себе с помощью постановки целей, планирования и организации, они развивают навыки совместной работы с помощью социального обучения и становятся мотивированными (Bell, 2010). Обучение на основе командных проектов способствует развитию способности к сотрудничеству, критического мышления, творческого мышления, ответственности и общения.

Вопросы организации проектно-ориентированного обучения рассматривали в своих работах многие исследователи (Blumenfeld et al., 1991; Malkova, 2005; Bell, 2010; Dul'zon, 2010; Gulakova & Harchenko, 2014; Ljubimov et al., 2015; Gergert & Artem'ev, 2019).

Проектно-ориентированное обучение организуется с целью подготовки обучающихся к успешной деятельности в информационно и технологически насыщенном мире, строится на партнерских взаимоотношениях участников процесса, включающих совместный поиск информации, овладение умениями использовать полученные знания при создании собственного интеллектуального продукта.

В силу важности и распространенности проектного подхода выделяют особый вид компетентности специалиста – проектную компетентность. С одной стороны, проектная компетентность является профессионально обусловленной, в российских образовательных стандартах высшего образования проектная деятельность является одним из видов профессиональной деятельности. С другой стороны, проектная компетентность объединяет в своей структуре и общекультурные, и профессиональные компетенции (Gulakova, 2014).

В настоящее время российское общее образование переходит на новые образовательные стандарты, которые предусматривают обязательное формирование у учащихся умений выполнения проектной деятельности. Однако сегодня в вузы поступают выпускники школ, обучавшиеся по образовательному стандарту, не предписывавшему использование проектных методов обучения. Таким образом, возможно, существует противоречие между необходимостью использовать в высшей школе проектно-ориентированное обучение и недостаточной готовностью выпускников школ к осуществлению проектной деятельности.

Следует отметить исследование готовности студентов к участию в проектном обучении (Staroverova, Andreeva, & Shakirova, 2014), в котором на основании метода описательной статистики было выявлено, что 92,7 % опрошенных студентов имеют желание участвовать в коллективных проектных работах, они изначально заинтересованы в совместных проектах и готовы в них участвовать. Однако в указанном исследовании рассматривались только вопросы мотивации студентов к проектной деятельности, и не исследовались другие аспекты готовности студентов к проектно-ориентированному обучению.

Авторы на протяжении ряда лет проводят исследования в области оценивания универсальных компетенций студентов (Medvedeva, Martynyuk, Pan'kova, & Solovyova, 2017; Medvedeva et al., 2018; Medvedeva et al., 2019). Целью данной статьи является анализ готовности первокурсников института математического моделирования и игропрактики Псковского государственного университета, обучающихся на различных направлениях подготовки, к проектно-ориентированному обучению в вузе.

В ходе исследования были использованы следующие методы: анализ научной литературы по проблеме исследования, наблюдение, экспертная оценка, анкетирование, статистический анализ результатов.

### **Материалы и методы** *Materials and methods*

Авторами были выделены следующие компоненты готовности студентов к проектной деятельности и показатели их сформированности (табл. 1).

Оценивание готовности студентов первого курса к проектной деятельности проходило в течение первой недели обучения, в рамках проектной сессии «Город, в котором я учусь». В оценивании участвовали 69 студентов, обучающихся на следующих образовательных программах: Педагогическое образование, профиль Математика (19 чел.), Педагогическое образование, Профиль Информатика и Физика (17 чел.), Прикладная информатика, Профиль Прикладная информатика в образовании (17 чел.), Математика и компьютерные науки (16 чел.). Одной из задач проектной сессии было знакомство с Псковом и теми возможностями, которые город предоставляет студенту. Проектная сессия началась с постановки целей и задач, после чего последовало командное обсуждение, в ходе которого студенты определялись с тематикой своего проекта, формулировали критерии, по которым можно будет оценить результат их проектной деятельности. Эксперты, наблюдая за ходом

командного обсуждения, оценивали работу в команде, самостоятельность и креативность.

Для оценки готовности первокурсников к проектной деятельности использовались самооценка, взаимооценка и экспертная оценка. Необходимость использовать в проектной деятельности самооценку и оценку со стороны сверстников, эффективность взаимооценки подтверждается многими исследователями (Falchikov & Goldfinch, 2000; Wever et al., 2011; Kokotsaki, Menzies, & Wiggins, 2016). Самооценка выделенных компонент готовности к проектной деятельности проводилась в форме анкетирования до и после проектной сессии. При ответе на вопросы студенты давали развернутый ответ или выбирали один из ответов «да», «скорее да, чем нет», «скорее нет, чем да», «нет». Экспертная оценка также осуществлялась по выделенным показателям готовности к проектной деятельности.

Таблица 1. Компоненты готовности студентов к проектной деятельности  
Table 1 Readiness of students to the components of project activities

Компоненты	Показатели
опыт проектной деятельности	– участие в проектной деятельности
самоорганизация проектной деятельности	– умение формулировать проблему – постановка цели и задач проектной деятельности – проектирование конечного продукта – способность планировать деятельность – способность анализировать ресурсы для выполнения проекта и отбирать средства для реализации задач
мотивационно-рефлексивный компонент	– заинтересованность в положительном исходе проектной деятельности – вовлеченность в деятельность – умение сформулировать критерии оценивания результата – умение объективно оценивать достигнутые результаты, соотносить их с поставленными целями – самоанализ, самооценка проектной деятельности
работа в команде	– умение взаимодействовать с другими людьми в достижении общих целей – эмоциональная устойчивость – проявление эмпатии и такта в общении с коллективом
работа с информацией	– самостоятельный сбор информации – анализ и обработка информации – структурирование информации с учетом поставленной задачи

способность презентовать продукт	<ul style="list-style-type: none"> <li>– навыки публичного выступления</li> <li>– способность упаковать продукт</li> <li>– психологическая готовность выступать публично</li> </ul>
самостоятельность, креативность	<ul style="list-style-type: none"> <li>– принятие самостоятельных решений в ходе осуществления проектной деятельности</li> <li>– инициативность</li> <li>– генерирование идей (креативность мышления)</li> </ul>

Было организовано информационное сопровождение проектной сессии: представлена актуальная информация, проводилось анкетирование, размещены результаты проектной деятельности.

На заключительном этапе проектной сессии была проведена рефлексия, а также взаимооценка составляющих готовности к проектной деятельности.

### **Результаты и их обсуждение** *Results and discussion*

В рамках проектной сессии студенты работали над проектами, которые они назвали «Город, в котором я учусь», «Город, в котором я живу», «Легенды города Пскова», «Special for students».

Проанализируем полученные результаты по выделенным компонентам проектной деятельности.

#### *Опыт проектной деятельности*

Входное анкетирование студентов перед проектной сессией показало, что, в школах, в которых учились первокурсники, учебные и социальные проекты выполнялись, это отметили более 90% опрошенных. Вместе с тем, только 41% студентов участвовал в проектной деятельности. Таким образом, больше половины первокурсников не имеют опыта проектной деятельности. Это связано с тем, что они обучались по образовательным стандартам, не содержащим требования обязательного участия школьников в проектной деятельности. Поэтому для организации проектно-ориентированного обучения в вузе нужно учитывать недостаточный опыт проектной деятельности первокурсников во время обучения в школе.

#### *Самоорганизация проектной деятельности*

Результаты исследования показали, что 88% первокурсников могут проанализировать задачу, выделяя основные составляющие, при этом стараются искать разные варианты решения задачи 97% опрошенных студентов, а учитывают достоинства и недостатки разных решений задачи 91% анкетированных. Большинство студентов (83%) понимали, какую

проблему решал проект, в котором они участвовали, какую цель ставила перед собой группа. Однако только 69% опрошенных студентов понимали, какой продукт они хотели получить во время проекта. При этом в ходе исследования выяснилось, что если первокурсники не участвовали в проектной деятельности, когда обучались в школе, то при ответе на вопрос анкеты о решаемой проблеме проекта, они, как правило, отвечали - «не знаю», «никакую», о продукте проекта – «просто хорошие эмоции», «главное не продукт, главное участие», «качественный продукт», «победа».

На вопрос «Как была спланирована работа Вашей группы по выполнению проекта?» только треть опрошенных студентов ответила, что в ходе выполнения проекта были распределены обязанности, организована работа в малых группах. Остальные студенты дали ответы общего характера.

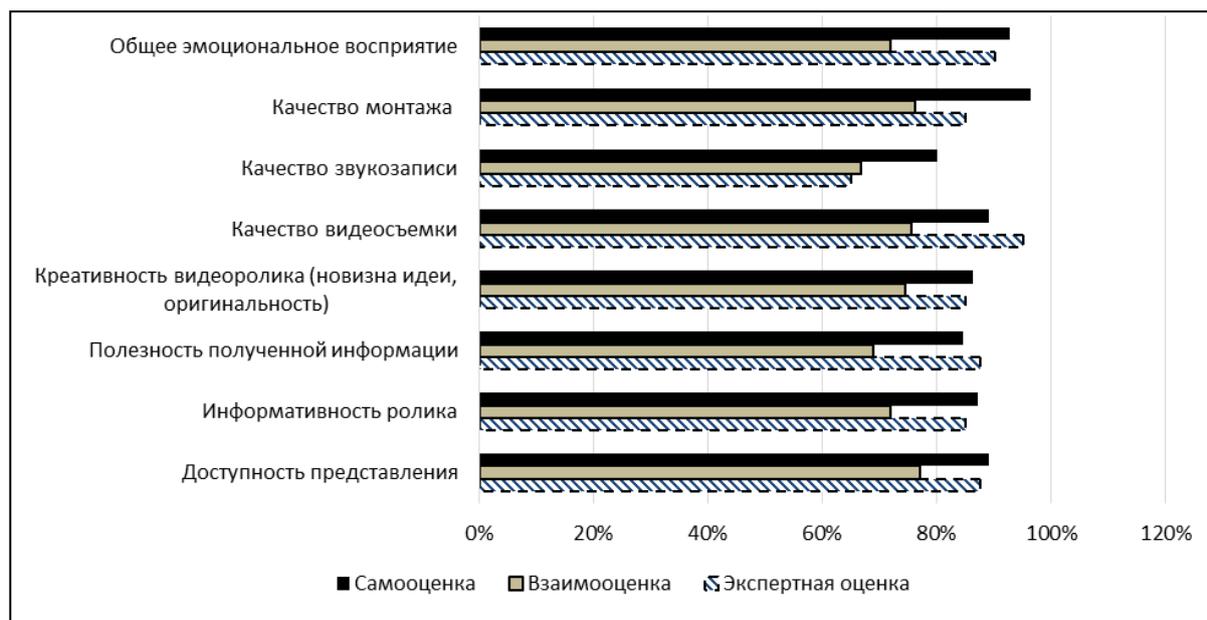
Таким образом, можно сделать вывод, что необходимо активно вовлекать студентов в проектную деятельность в вузе, организовывать совместную работу студентов, учить их планированию своей деятельности.

#### *Мотивационно-рефлексивный компонент*

В ходе командного обсуждения группы, участвующие в проектной сессии, формулировали критерии оценки результатов своей деятельности. Следует отметить, что все группы обращали внимание на две составляющие в оценке результата: содержательную и презентационную. Среди «критериев содержания» каждая группа выделяла актуальность, достоверность информации. Критерии, относящиеся к представлению проекта, во многом определялись тем, в какой форме группа решила представить результат. Таким образом, можно сделать вывод о том, что команды первокурсников проявили умение формулировать критерии оценивания результата проектной деятельности.

На заключительном этапе проектной сессии каждый студент оценивал результаты выполнения проекта своей группой (самооценка), а также другими группами (взаимооценка) по критериям, которые они сформулировали. По этим же критериям результаты проекта оценивались преподавателями (экспертная оценка).

По каждому из четырех проектов результаты самооценки, взаимооценки и экспертной оценки имеют некоторые различия. Оценка со стороны однокурсников, как правило, ниже, чем самооценка, а для большего числа критериев и ниже экспертной (например, см. рис. 1).



*Рисунок 1. Самооценка, взаимооценка, экспертная оценка проекта «Special for students»*

*Figure 1 Self-assessment, mutual assessment, expert assessment of the project “Special for students”*

Подавляющее большинство опрошенных студентов считает, что группа достигла цели проекта, при этом 88% студентов удовлетворены полученным результатом. Личную ответственность за результат ощущали 77% студентов, при этом 95% студентов считают, что они внесли свой вклад в этот проект. Участие в данном проекте посчитали интересным 83% студентов, а 86% студентов посчитали этот проект полезным для себя. При этом 78% студентов отметили, что на этапе подготовки проекта осуществляли его промежуточную оценку.

Таким образом, большинство опрошенных студентов были заинтересованы в положительном результате проекта, смогли сформулировать критерии оценивания и оценить достигнутые результаты.

#### *Работа в команде*

Самооценка первокурсников в ходе анкетирования до выполнения проекта показала, что студенты стараются сотрудничать с другими участниками группы для выполнения задания (93%), учитывают особенности поведения и интересы других участников группы при общении (98%), делятся своими знаниями и опытом с членами команды при выполнении задания (84%), оценивают идеи других членов команды для достижения поставленной цели (93%), корректно ведут себя при взаимодействии с другими членами команды (98%).

После участия в проекте самооценка своей деятельности у студентов поменялась, первокурсники в основной массе оценили проявление составляющих проектной деятельности у себя ниже, чем до участия в проекте (см. рис.2). Это связано, по-видимому, с тем, что не все студенты оказались вовлеченными в проектную деятельность, некоторые из них не смогли проявить себя в работе своей группы, были пассивными участниками. Наблюдение за первокурсниками во время командного обсуждения, представления результатов проектной деятельности подтверждает это предположение.

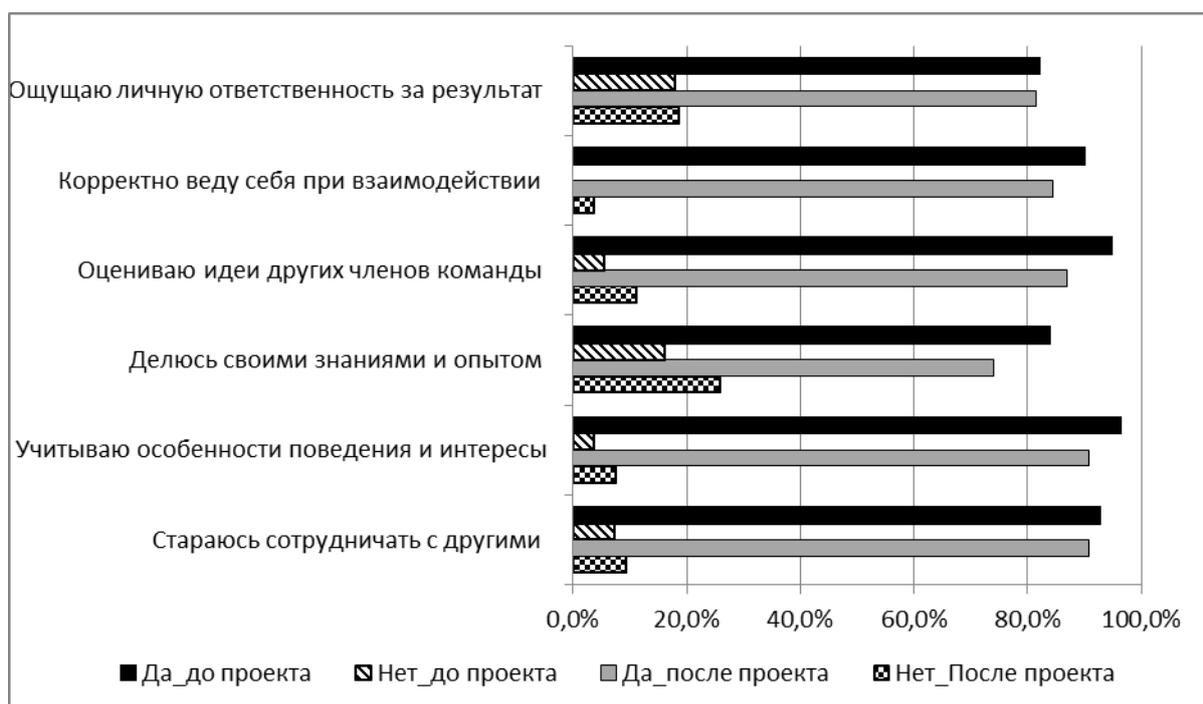


Рисунок 2. Результаты анкетирования  
Figure 2 Questioning Results

По мнению студентов, они умеют выбирать стиль общения в зависимости от цели общения/собеседника (94%), корректировать свое поведение в процессе общения (89%), могут сдерживать свои эмоции во время общения (83%). В то же время экспертная оценка показала, что выбирать стиль общения в зависимости от цели общения/собеседника могут 71% студентов, сдерживать свои эмоции во время общения умеют 79%, корректировать свое поведение в процессе общения только 34%.

Таким образом, результаты исследования показали, что необходимо создать условия для формирования коммуникативных умений студентов во время обучения в вузе.

### *Работа с информацией*

Самооценка первокурсников показала, что 100% студентов умеют определить, какую информацию нужно найти для решения поставленной задачи, 91% могут отличить факты от мнений, 86% проанализировать найденную информацию, 94% опрошенных осуществляют поиск информации, используя различные типы запросов. Аргументировать свои выводы и точку зрения умеют согласно самооценке 88% первокурсников, а согласно экспертной оценке лишь 56% студентов.

Таким образом, первокурсники считают, что в основном умеют осуществлять поиск информации, анализировать, структурировать полученный материал. Необходимо в ходе учебного процесса в вузе акцентировать внимание преподавателей на формировании у студентов умения отстаивать свою точку зрения, аргументировать её, делать выводы.

### *Способность презентовать продукт*

Согласно результатам самооценки 80% первокурсников грамотно (доступно, понятно) выражает собственные мысли, могут публично выступить 63% студентов, при публичном выступлении учитывают аудиторию и цель выступления 83% анкетированных.

Экспертная оценка показала, что грамотно (доступно, понятно) выражать собственные мысли могут 68% первокурсников, публично выступить – 88%, однако при этом учитывать аудиторию и цель выступления умеют только 43%. Можно предположить, что самооценка первокурсников по ряду показателей оказалась завышенной. Следовательно, в процессе обучения в вузе целесообразно практиковать публичные выступления студентов на занятиях, конференциях, во внеучебной деятельности.

## **Выводы** *Conclusions*

Таким образом, проведенное исследование показало, что больше половины первокурсников не участвовали в проектной деятельности до поступления в университет, вместе с тем они готовы к проектно-ориентированному обучению, у них в основном сформированы компоненты показателей готовности к проектной деятельности. Отметим, что значимых различий в сформированности показателей готовности к проектной деятельности у студентов, поступивших на разные направления подготовки, не выявлено.

Усиление проектно-ориентированной направленности учебного процесса в вузе, использование проектно-ориентированного обучения будет способствовать подготовке выпускника с проектным мышлением.

## Summary

Training a specialist with project thinking is one of the trends in modern higher education. Specialists with soft skills are in demand in society. Training using project technologies helps to develop such skills. Project-based learning is a student-oriented form of learning in which students are actively involved in the learning process and achieve their goals through social interactions and the exchange of knowledge and understanding.

The purpose of this article is to analyze the readiness of first-year students of the Institute of Mathematical Modeling and Game Practice of Pskov State University for project-oriented study at a university

Assessment of the readiness of first-year students for project activities took place as part of the project session, in which 69 students participated. Self-assessment of the preparedness components for project activities identified by the authors was carried out in the form of questionnaires before and after the project session. Expert evaluation was carried out during a team discussion, presentation of project results and during training. An mutual evaluation of the obtained products of project activity was carried out according to the criteria developed by the students themselves. The obtained ratings were compared.

The research showed that more than half of the first-year students did not participate in project activities before entering the university. However, they are generally ready for project-oriented training, components of readiness for project activities are mainly formed. Therefore, it is necessary to build the educational process in a university in such a way as to strengthen its project orientation, attracting project-oriented training.

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# ANALYSIS OF ATTITUDES TO EDUCATIONAL REFORMS IN UKRAINE OF PHYSICAL EDUCATION TEACHERS AND PRIMARY EDUCATION TEACHERS

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**Abstract.** *Questions, connected with conduction educational reforms on the modern stage in Ukraine, are discovered in this article. Those changes are connected with desire of Ukrainian society to join European society and to sigh Association with European Union. The educational reform is implemented in primary school. The goal is to find out and analyze physical education teachers' and primary school teachers' opinion about implementation educational changes on the present stage in Ukraine.*

*In due to realize such goal we applied literature sources analysis and questionnaire. The questions were answered by 100 physical education teachers and 104 primary school teachers from Lviv region. We have discovered opinion of physical education teachers and primary school teachers is common. The highest level of support got: opportunity to choose and create educational program in terms of educational standards (82% of physical education teachers, 78,9% of primary education teachers), providing different forms of elementary education (76% and 73,1% respectively), applying game methods in studying in elementary school (72% and 69,23% respectively). We have noticed difference in teachers' attitude towards verbal evaluation of pupils during physical education lessons, progressive forms of retraining and teachers' independent attestation. Teachers do not support 12-years studying period and implementing the inclusion.*

**Keywords:** *educational reform, "New Ukrainian School", physical education teachers, primary education teachers, Ukraine.*

## **Introduction**

New political course in Ukraine develop the basis of permanent changes. Among those changes are educational in tight accordance to social context, which is dynamically transforming. Education, which is developing intensively should be appropriate with Ukrainian society, which is changing intensively and tries to catch up temps of development of west countries (Semenets-Orlova, 2015). That is why, desire to European integration require dramatic transformations in education system.

In accordance to this, the need to reform educational branch appeared in Ukrainian society. As a result, Ministry of education of Ukraine elaborated and established educational reform, called “New Ukrainian School”. The basis of the reform are the best tendencies of European and world education. In the reform is mentioned step-by-step educational transformation during 2018-2029 years. There was proclaimed new educational goal and elaborated conceptual principles of reform.

The example of modern reform of unification of national system to European is transforming to 12-years system of education from 2018. What is more, the change of school structure to 3-level is declared, implemented such changes as integrated studying, inclusive education, new system of evaluation, providing different forms of education as formal, distance and individual forms of studying (New Ukrainian School, 2016).

The numerous amount of works with such theme is published abroad. Systematic research of problems that are connected with educational changes are discovered in scientific researches of classics of foreign theories: Raven & Stephenson, 2001; Westera, 2001; Burrows, 2005; Briška et al., 2019; Escalie, Recoules, Chalies, & Legrain, 2019 and others.

Foreign scientists payed attention on the meaning of competence studying with educational reforms (Augskalne & Garjane, 2019); effective school management in conditions of educational changes (Barnett, 1994); forming of competence studying in educational programs from different countries (Raven & Stephenson, 2001; Westera, 2001 and other).

Educational reforms are discussed actively and systematically in Ukrainian science and they are clarified in scientific articles of Savchenko, 2010; Sorokolit, Shyyan, Lukjanchenko, & Turchyk, 2017; Hrynevych, 2018; Liashenko, 2018; Moskalenko, 2019 and others.

Scientific research of O. Savchenko opened the experience of reforming Ukrainian education, determine lessons and further progress of reforms. The research of L. Hrynevych determines elaborating of new standard of education based on European examples. O. Liashenko emphasizes on priority of development of Ukrainian school in condition of education reforming.

N. Moskalenko outlines the ways to implementing key competences in physical education pupils according to “New Ukrainian School” reform.

However, we did not find scientific research that would represent pedagogues’ opinion about effectiveness of such educational changes in Ukraine. This caused the relevance of our research.

The goal is to find out and analyze physical education teachers’ and primary school teachers’ opinion about implementation educational changes on the present stage in Ukraine.

## Methodology

We have provided the analysis and generalization of domestic and foreign source base about questions of reforming the education and physical education in the scientific article. This helped us to state about relevance of educational reforms as in Ukraine, so abroad. What is more, we have applied to sociological method – survey through questionnaire. The questions were answered by 100 physical education teachers and 104 primary school teachers. Based in the answers we calculate the interest value of respondents’ answers (processed answers mathematically).

We have discovered and analyzed physical education teacher’s from Lviv region attitude towards educational reform on the modern stage of Ukrainian society development in previous researches (Sorokolit, 2019). In this publication we provide the comparative analysis of physical education teacher’s and primary education teacher’s attitude towards reforms as well as educational reforms from “New Ukrainian school” are implemented in 1-2 classes of general secondary school nowadays. Answers from survey were compared between physical education teachers (n=100) and primary education teachers (n=104). All respondents had given their agreement in participation in the research. (Table 1).

*Table 1 The quantity of teachers with different levels of qualification*

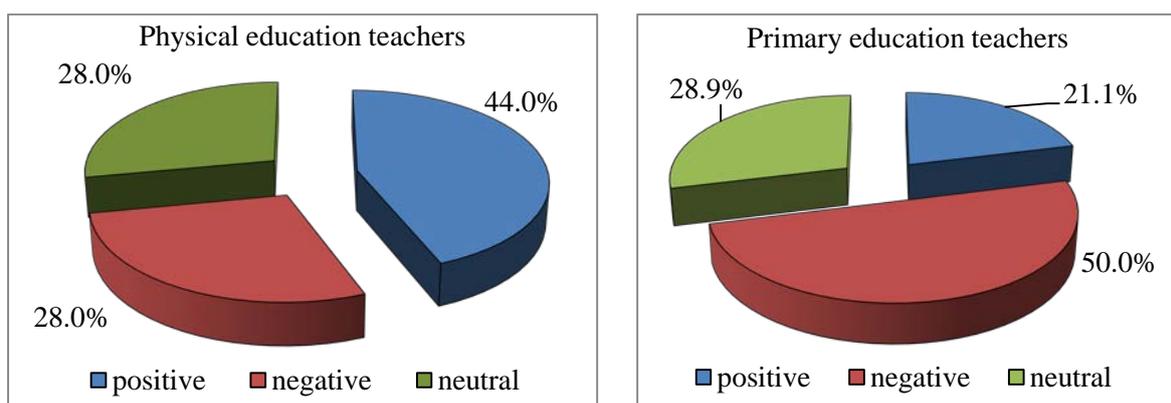
<b>Levels of teachers’ qualification</b>	<b>Physical education teachers</b>	<b>Primary education teachers</b>
Higher category	44,0%	55,8%
First category	24,0%	26,9%
Second category	14,0%	3,9%
Without any category	18,0%	13,5%

## Results and Discussion

The analysis and generalization of teachers’ survey’s results gives opportunity to affirm that physical education teacher’s and primary education

teacher's opinion about innovations in system of general secondary school is ambiguous. That is how the change of school structure into three levels of education (primary, gymnasium and lyceum) support 54% of physical education teachers and 48,1% of primary education teachers. Also 36% of physical education teachers and 23,1% of primary education teachers are neutral about the change of the structure. The huge difference is among negative answers of interviewed teachers about the innovation. Only 10% of physical education teachers do not support implementation in general secondary school. From the contrary, 28,9% of teachers reacted negatively about educational innovation.

The same situation found out in the teachers' opinion about 12-years studying period implementation. This innovation is supported by 44% of physical education teachers and 21,1% of primary education teachers. From the other side, the half of primary education teachers and 28% of physical education teachers do not support 12-years studying period. 28% of physical education teachers and 28,9% of primary education teachers are neutral (Fig. 1).



*Figure 1 Attitude of Ukrainian teachers to 12-years studying period in general secondary schools*

One of innovations from the reform “New Ukrainian School” is implementation of integrated studying and split of studying materials according to themes of studying weeks. All of the respondents have almost the same opinion about such innovation. The integration is supported by 56% of physical education teachers and 50% of primary education teachers. No essential differences exist among respondents' thought in neutral and negative aspects. 34% of physical education teachers and 34,6% of primary education teachers are neutral about the innovation. 13,4% of primary education teachers and 10% of physical education teachers do not support integration in studying. We found out that physical education teachers and primary education teachers have different definition of integrated lessons in physical education. Integrated lessons of physical education in the meaning of primary education teachers is implementation of sport minutes

and sport pauses during lessons of mathematics, writing or reading. The physical education teachers treat the integration as implementation of theoretical topics from different subjects while achieving educational tasks from physical education. Moreover, physical education teachers are convinced that physical education lesson can be successfully held with other lesson of state component of studying plan (Fig.2).

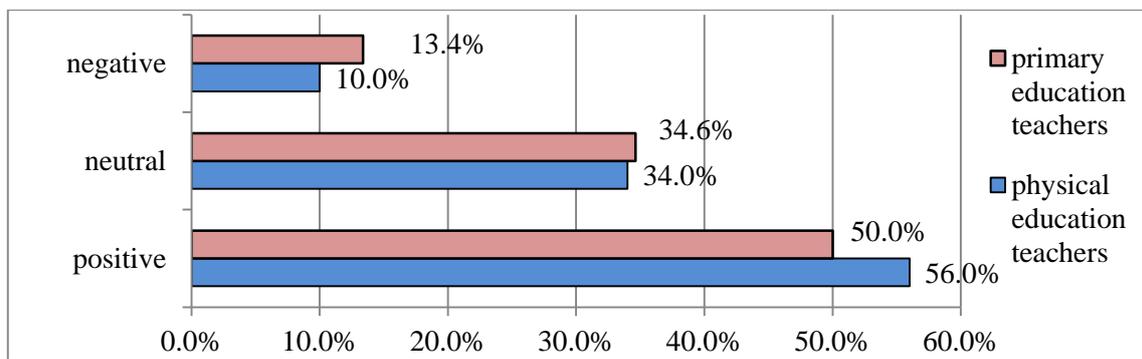


Figure 2 Respondents' attitude to cross-subject integration into physical education

The studying material is better for pupils' perception in younger school age through game methods of studying. That is why, we were interested in physical education teacher's and primary education teacher's opinion about studying through game methods in school and outside the school. While analyzing the survey we can state that such innovation is well supported by physical education teachers (72%) and primary education teachers (69,2%). The great difference is between negative and neutral respondents' attitude. 24% of physical education teachers and 13,4% of primary education teachers are neutral. Negative attitude has displayed 4% of physical education teachers and 13,4% of primary education teachers.

The big differentiation is among respondents' opinion according to evaluation of studying results during physical education lessons. Physical education teachers state that evaluation by points motivates pupils to be more active. Their attitude is positive. From the contrary, primary education teachers support verbal and formative assessment of studying achievements in primary school. They are convinced in the need of pupils' verbal assessment application during physical education lessons. Primary education teachers are sure that point evaluation during physical education lessons is the coercion tool to exercise during physical education lessons. The question "Do you support verbal assessment of pupils' studying results on the physical education lessons?" the positive answer was made by 92,3% of primary education teachers and by 14% of physical education teachers. Negative attitude to such type of evaluation have 42% of physical education teachers. Teachers think that point evaluation absence

during physical education lessons may lower children's discipline and exercises performing would lose motivation. This would lead to decreasing of pupils' motor activity. Among primary education teachers such opinion is supported by 5,8%. 44% of physical education teachers and 1,9% of primary education teachers are neutral about any type of evaluation (Fig.3).

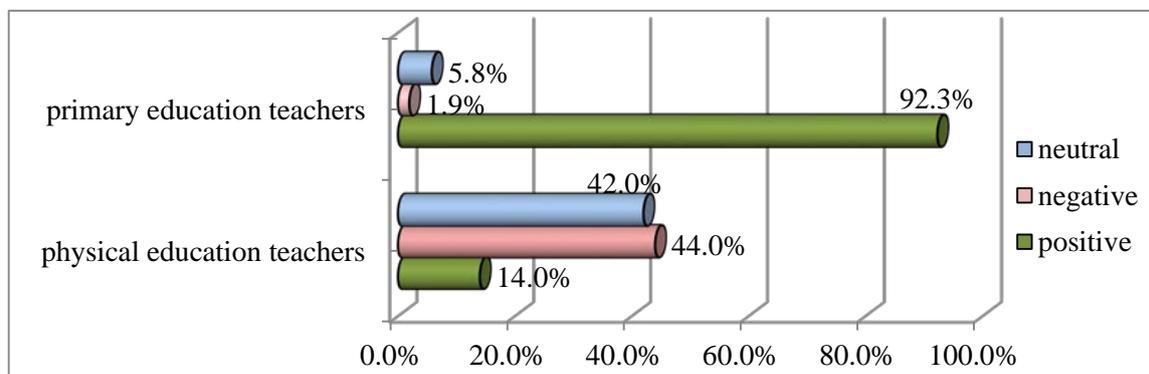


Figure 3 Respondents' attitude to verbal assessment of primary school pupils' studying results during physical education lessons

Among educational innovations exist implementation of inclusive studying into general secondary schools. The problem of inclusive studying is widely described by Ukrainian scientists (Bodnar & Prystupa, 2014; Solovey & Rymar, 2018). This innovation is supported by both categories of respondents. 34% of physical education teachers and 32,7% of primary education teachers approve inclusive studying implementation. 40% of physical education teachers and 23,1% of primary education teachers are neutral.

In the research no big difference exists about negative attitude of categories of respondents. Thus, 24% of physical education teachers and 28,9% of primary education teachers decline the necessity in applying inclusive studying into physical education lessons. In the end, 2% of physical education teachers and 15,4% of primary education teachers remain uncertain.

According to Law of Ukraine "About education" it is forecasted to provide different forms of getting education. The forms are formal, distance and individual. The teachers' interviews give intention to tell about generally positive attitude to this innovation. The results are: 76% of physical education teachers and 73,1% of primary education teachers support different forms of studying. 16% of physical education teachers and 11,5% of primary education teachers are neutral. 8% of physical education teachers and 5,8% of primary education teachers do not perceive the innovations. 9,6% of primary education teachers have not decided yet.

The question "What is your attitude to freedom to choose or create the studying program in terms of education standards?" was positively answered by

82% of physical education teachers and 78,9% of primary education teachers. Neutral answers were made by 8% of physical education teachers and 13,5% of primary education teachers. 10% of physical education teachers and 7,7% of primary education teachers do not support the innovation. Although, there is a high level of support among respondents, both physical education teachers and primary education teachers prefer painted materials: methodic providing the subject that is elaborated by specialist from the sphere instead of independent development of authors' training programs, calendar and thematic planning and lessons noting. That is, 62% of physical education teachers and 71,2% of primary education teachers believe in appropriate applying of methodical developments of other teachers into their own work experience. 38% of physical education teachers and 19,2% of primary education teachers make work documentation individually (Fig.4).

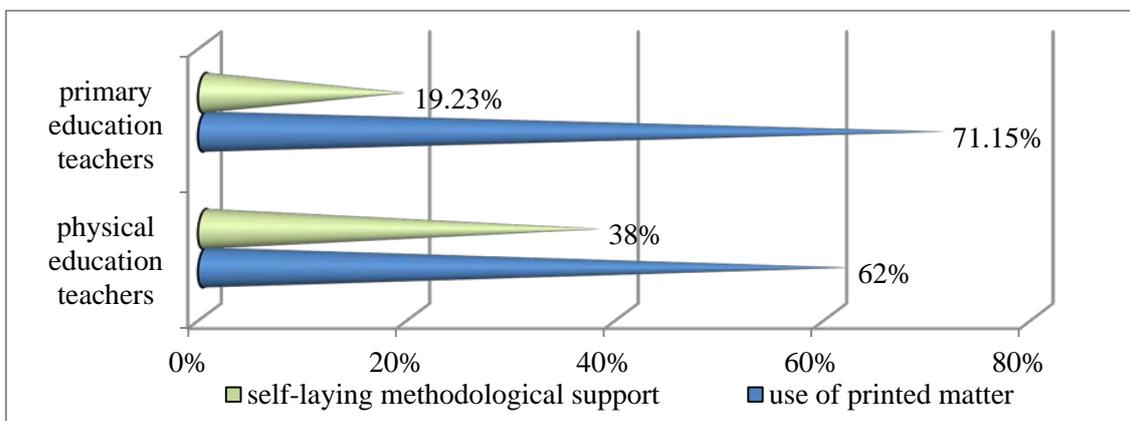


Figure 4 Respondents' attitude to ability to choose methodical providing

The higher level of support has got the innovation of teaching the subject according to the only studying program that is approved by profile ministry. It is also important to note, that 44% of physical education teachers would like to adapt the physical education studying program to conditions of school. This position is also supported by 25% of primary education teachers. The huge difference in answers is according to teachers' desire to work according to author training programs of physical education. Thus, 10% of physical education teachers and 1,9% of primary education teachers have shown the desire to work according to author training programs. Teachers' ability to have choice to held physical education lessons according to author and adapted to school conditions programs or according to unified educational program, was supported by 16% of physical education teachers and 38,5% of primary education teachers (Fig.5).

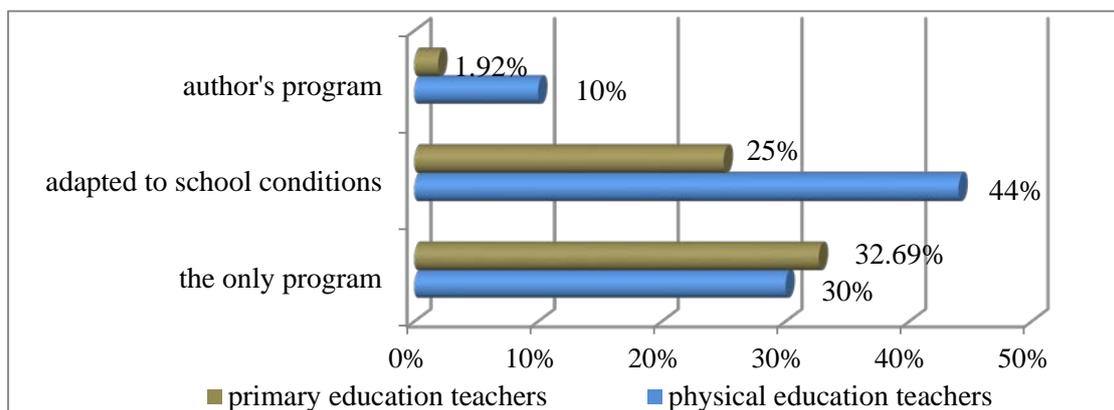


Figure 5 Respondents' attitude to ability to choose studying program

The innovational approaches to teachers' self-education and implementation of independent teachers' certification are forecasted by educational reform. The teachers' attitude to this differentiates. The high level of support was provided by physical education teachers. The system of distance qualification increase and different forms of course retraining was supported by 50% of physical education teachers and 28,9 of primary education teachers. 32% of physical education teachers and 34,7% of primary education teachers have neutral opinion. 18% of physical education teachers and 17,3% of primary education teachers decline the importance and necessity of this innovation. It was difficult to give certain answer for 11,5% of primary education teachers.

During the independent certification of teachers, we found out the big difference between respondents' categories in their positive and negative attitudes. 70% of physical education teachers said that such implementation is important and it gives opportunity to find objective and unbiased evaluation of pedagogical activity. But among primary education teachers this result is much lower – 28,9%. 4% of physical education teachers and 32,7% of primary education teachers do not support implementation of certification. Such negative attitude of primary education teachers can be connected with the situation, that all educational reforms are going to be implemented in primary classes at first. 22% of physical education teachers and 25% of primary education teachers have neutral attitude to certification implementation.

The question “Are you aware with “New Ukrainian school” standards of primary education?” was answered in such way: 40% of physical education teachers and 55,8% of primary education teachers think they understand educational standard very well. The difference exists between respondents' answers in partly awareness of educational standards. 54% of physical education teachers and 40,4% of primary education teachers think they do not know the determination fully. The total absence of knowledge about specifics of

educational standards according to “New Ukrainian School” have displayed 6% of physical education teachers and 3,9% of primary education teachers.

The qualification increasing courses are the main source to get information about educational standards according to respondents’ thoughts. This point is supported by 64% of physical education teachers and 67,3% of primary education teachers. Our research represented that they pay attention on the question of educational changes implementation in the general secondary school. The standards of educational reform “New Ukrainian School” was the subject of discussion during meetings of the schools’ pedagogical councils. This is confirmed by 44% of physical education teachers and 46,2% of primary education teachers. Media is the next level according bearing information about educational standards specifics. 36% of physical education teachers and 38,5% of primary education teachers got to know about educational standards implementation on the competence basis through media. What is more, 32% of physical education teachers and 25% of primary education teachers got to know about specifics of educational standards though Internet. It is important to notice that 8% of physical education teachers learned about the news from their colleagues and friends. With this, 13,5% of primary education teachers usually discuss the process of implementation of educational standards from “New Ukrainian School” with their colleagues. We think that such situation is natural because “New Ukrainian School” educational standards have to be applied to all subjects from primary school classes. It requires simultaneous realization during while teaching pupils. Within it, those physical education teachers that teach the subject “Physical education” for primary school pupils, are interested in specifics of new educational standards and discuss it regularly.

## **Conclusions**

1. Teachers have positive attitude to reforms in educational system of the country. They understand its necessity to be implemented and have similar ideas about ways to implement in practical activity.

Hopefully, physical education teachers and primary education teachers equally support implementing of different forms of studying pupils in new Ukrainian school (formal, distance and individual) (76% and 73,1%) and teachers’ freedom to create studying programs (82% and 78,9%). Within physical education teachers (10%) express their desire to teach according to author programs, primary education teachers (38,5%) would like to choose according to which program to teach physical education. More than half of teachers support wide implementing of game methods in physical education process in primary classes (72% and 69,2%). Some distinguishes were revealed in the quantity of neutral and negative attitude to this among two groups of respondents. The half

of teachers support cross-curricular integration in studying (56% and 50%). Though, physical education teachers and primary education teachers have different understanding of the meaning of integrated lessons in physical education.

2. Primary education teachers are more progressive in the attitude according to verbal form of evaluation pupils during physical education lessons. Physical education teachers are more progressive according different form of retraining and independent attestation of teachers. The analysis of answers states about positive attitude of majority of primary education teachers according verbal form of evaluation pupils during physical education lessons (92,3%). Though just 14% of physical education teachers support such reform. From the contrary, physical education teachers are more positive thought according new forms of retraining (50% and 28,9%) and independent attestation of teachers (70% and 28,9%).

3. The minority of physical education teachers and primary education teachers support inclusive studying implementing into “New Ukrainian School” (34% and 32,7%) and 12-years studying period (44% and 21,1%). That is why it is essential to improve physical education teacher’s understanding of all functions of evaluation during physical education lessons and for primary education teachers – the relevance and effectiveness of new forms of retrain courses. It is important for Administration to listen to teachers’ thoughts and discuss publically alternative suggestions according other form of inclusive children studying and the period of studying.

4. For effective implementing educational reform “New Ukrainian School” into the general secondary schools’ practice they have to popularize educational reforms among teachers during the courses of qualification improvement, educational seminars, methodic units of teachers and to provide public listening with the problem of implementing reforms. What is more, there exist the need in elaborating the plan of realization educational reforms on the school, town, city or region levels in the educational communities.

### **Gratitude**

Authors of the research express sincere gratitude to management of Lviv state department of Committee of physical education and sport of Ministry of education and science of Ukraine for given opportunity to interview physical education teachers and primary education teachers during qualification increasing courses providing. We also are grateful for opportunity to reveal teachers’ attitude to educational innovations implementation on the initial stage of their applying.

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# ОСОБЕННОСТИ ПОЗНАВАТЕЛЬНОЙ АКТИВНОСТИ ПРЕПОДАВАТЕЛЕЙ ВУЗОВ РОССИИ

## *Features of Cognitive Activeness of University Teachers in Russia*

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**Abstract.** *There has been a decrease of the activeness in the sphere of self-improvement among specialists. It can be assumed that this happens with university teachers as well, and the reason for this might be the fall of their cognitive activeness. The author of the article determines the particularity of the cognitive activeness, its most valuable indicators, as well as their psychological factors. The objective is to reveal the peculiarities of cognitive activeness for further scientific justification of the ways of its development. The questionnaire and the experiment methods were used, the cognitive activeness of the teachers was measured with the scale-type survey, worked out by J.J. Zhukov; the satisfaction with the performance was measured with the expert assessments survey, worked out by G.V. Lozovaja; the pedagogical abilities, the motives of professional activity, the successfulness of the performance and the adaptation to it were determined by the A.N. Nikolaev's surveys. The main results are the following: the components of cognitive activeness dominate – the integration of educational material, supra-situational activity, the interest in cognition. The components of cognitive activeness have an impact on all indicators of teachers' adaptability. Three types of teachers have been identified: those motivated to the success of their activity; those motivated to the process itself; and those who are passionate about their activities. These types correspond to the results of the factor analysis with factors that are focused on the profession and self-improvement through cognitive activeness, on the activity preference based on one's interests, and on the success of the activity according to one's abilities.*

**Keywords:** *adaptability, cognitive activeness, correspondence of goals to results, motives for professional activity, pedagogical abilities, satisfaction, stress resilience for the activity, successfulness of the performance.*

## **Введение** *Introduction*

В последние годы в России из-за постоянно увеличивающейся нагрузки по документообороту прослеживается снижение познавательной активности у большей части дипломированных специалистов, а соответственно, и снижению проявления активности в профессиональном росте и в деле самосовершенствования. На первый взгляд, кажется, что познавательная активность давно исследована и это не актуально. Но именно это «давно» и составляет основную проблему научного обеспечения современного последипломного образования, поскольку в России за последние 10 лет существенно, и в худшую сторону изменились социально-экономические условия для профессиональной деятельности. Сказанное в полной мере относится и к деятельности преподавателей вузов.

Кроме того, исследования познавательной активности, как правило, проводились на выборках учащихся средних общеобразовательных школ или студентов. Познавательная активность дипломированных специалистов практически не исследована. Все это составляет актуальность исследования познавательной активности и ее общественной и личной ценности, а также ее мотивационных факторов.

Целью данного исследования явилось выявление особенностей познавательной активности преподавателей вузов для научного обоснования технологии ее развития и, в конечном итоге, – для профессионального роста и самосовершенствования преподавателей вузов.

Использовался метода письменного опроса и лабораторного эксперимента. Использовались методики: познавательная активность – Ю.Ю. Жуков (Zhukov, 2013); педагогические способности и мотивы деятельности – А.Н. Николаев (Nikolaev, 2005); успешность деятельности – Г.В. Лозова (Lozovaia, 2001) А.Н. Николаев (Nikolaev, 2005). адаптированность к деятельности – А.Е. Певзнера (Pevzner, 1996). Все показатели переводились в стандартные баллы (в стэны). Испытуемые: 36 преподавателей Псковского государственного университета.

## **Теоретическая основа темы** *The theoretical basis of the theme*

Анализ литературы показал, что познавательная активность лежит в основе многих характеристик деятельности, особенно учебной. Успеваемость студентов по специальным педагогическим дисциплинам, как оказалось, имеет неоднозначную связь с показателями познавательной активности. По данным С.Ю. Шаловой, только от 5 до 12% студентов с высокой

активностью имеют отличные оценки (Shalova, 2012). Характер влияния познавательной активности на характеристики даже учебной деятельности однозначно не определен.

Можно предположить, что от меры выраженности познавательной активности зависит успешность учебной деятельности, но форма этой зависимости требует дальнейшего исследования. Кроме того, от познавательной активности студентов, вероятно, зависит и удовлетворенность, получаемая от учебной деятельности. Удовлетворенность же является основным компонентом успешной адаптации к специфике и условиям обучения – адаптированности. Активность, в таком случае, может являться механизмом личностного развития, проявления и актуализации внутреннего потенциала в избранном виде деятельности (Fromm, 1990; Shlat et al., 2019). По мнению Н.С. Пряжникова, познавательная активность выступает фактором профессионального самоопределения (Priazhnikov, 2001; Priazhnikov, 2008).

В целом, можно сказать, что ценность познавательной активности бесспорна, но не однозначна. Ее исследования, как правило, ограничиваются рамками учебной активности. Особенности познавательной активности, ее психологические факторы, ее общественная и личная ценность у дипломированных специалистов остались практически не исследованными. Их исследование особенно актуально у специалистов-педагогов, которые в буквальном смысле должны всю жизнь учиться. Эти обстоятельства послужили причиной проведения такого же исследования, но на другой выборке испытуемых – на преподавателях высших учебных заведений.

### **Эмпирическое исследование** *Empirical research*

Использовались два исследовательских инструментальных метода: письменный опрос и лабораторный эксперимент. Познавательная активность преподавателей измерялась с помощью опросника шкального типа Ю.Ю. Жукова. Выявлялись 7 компонентов активности и их сводный показатель (Zhukov, 2013).

Педагогические способности преподавателей оценивались с использованием нового методологического подхода по экспериментальной методике А.Н. Николаева (Nikolaev, 2005). Здесь испытуемые дают ответы в процессе решения моделируемых практических задач, содержательно связанных с их профессиональной деятельностью. Признаком интегрального проявления способностей к педагогической деятельности является качество их ответов, которое оценивались экспертами. Для оценки способностей применялась так же методика репертуарных

решеток, где в качестве конструкторов выступали признаки способностей, а в качестве элементов – преподаватели. При этом изучались 11 частных способностей.

Мотивы профессиональной деятельности исследовались по опросной методике А.Н. Николаева (Nikolaev, 2005). Системообразующие показатели результатов деятельности определялись по двум критериям: успешности профессиональной деятельности и по адаптированности преподавателей к постоянно изменяющимся условиям деятельности и к ее специфике.

Успешность деятельности определялась с методике Г.В. Лозовой, с использованием опросного листа в форме таблицы, где строки отражают компоненты успешности, а столбцы – их оценки, выставляемые самим преподавателем и студентами – старостами групп (Lozovaia, 2001); и по успешности выполнения основных функций образовательного учреждения по методике А.Н. Николаева, где успешность деятельности измерялась только по критериям оценки продукта деятельности – изменение личности учеников в плане образовательного, воспитательного и развивающего эффектов. Это шкальный вариант анкеты, в которой преподаватели-кураторы по дисциплине специальности студентов оценивают не свою деятельность, а изменения личности учеников за последний учебный год. «Изюминкой» методики является то, что преподаватели даже не догадываются, что они оценивают собственные способности, по продукту собственной деятельности (Nikolaev, 2005). Данные двух методик заносились в сводную таблицу, поскольку они корреляционно связаны.

Адаптированность к условиям деятельности определялась по несколько модифицированной (приспособленной к специфике деятельности) методике А.Е. Певзнера (Pevzner, 1996).

Все значения показателей из баллов переводились в стандартные баллы (в стэны с десятичной разрядностью). Исследование проводилось на базе Псковского государственного университета. В качестве испытуемых выступили 36 преподавателей различных теоретических дисциплин. Выборка репрезентативна по возрасту и полу и в отношении данного вуза, который является типичным представителем для большинства вузов страны.

Мотивы профессиональной деятельности определялись для объяснения результатов исследования познавательной активности. Группы мотивов преподавательской деятельности получил следующую иерархию: 1) мотивы на сам процесс педагогической деятельности; 2) на возможность широкого общения; 3) на самосовершенствование.

В качестве дополнения испытуемые вписывали один мотив – это относительно свободный график работы, позволяющий где-либо иметь

дополнительную работу.

Далее, с отрывом расположились мотивы на: 4) высокий социальный статус; 5) на результат деятельности (многие отмечали, что результат никого не интересует, а важна своевременность и объем написанных бумаг, не имеющих пользы и мешающих работать); 6) и последнее место – это мотивы на материальное вознаграждение.

К числу наиболее значимых помех в своей работе, антимотивов преподаватели достаточно высоко зарегистрировали: значительные учебные нагрузки; отсутствие времени для подготовки к занятиям; необходимость работы более чем на 1 ставку.

Теперь о познавательной активности. Наблюдается значительный разброс выраженности компонентов познавательной активности – минимальное значение отличается от максимального в 2,17 раза. Коэффициенты вариации относительно невысокие (Таблица 1).

К числу наиболее выраженных компонентов познавательной активности относятся: интегрирование учебного материала (6,53 стэна; это достижение преподавателей, говорящее об их высокой компетентности); надситуативная активность (5,86 стэна), что говорит о том, что преподаватели все же готовятся к занятиям; и интерес к познанию (5,55 стэна).

Наименее выражены: комфортность учебной деятельности (3,01 стэна); волевые усилия (4,02 стэна); и самоорганизация процесса обучения (4,13 стэна), что говорит об ориентации преподавателей на организованную форму повышения последипломного образования.

*Таблица 1. Средние значения и коэффициенты вариации показателей познавательной активности*

*Table 1 The mean value and the coefficient of variation of the indicators for cognitive activeness*

Показатели познавательной активности	$\bar{X}$	$v$
Волевые усилия	4,02	18,3
Осознанный интерес к обучению	5,55	23,1
Самостоятельность в постоянной учебе	5,06	24,2
Самоорганизация процесса обучения	4,13	27,9
Интегрирование учебного материала	6,53	20,0
Надситуативная активность	5,86	25,7
Комфортность учебной деятельности	3,01	24,0
Познавательная активность в целом	5,01	15,9

$n = 36$

Из индивидуальных бесед с преподавателями о причинах низких значений познавательной активности выявлено, что первостепенной является

проблема обилия учебной документации, которую преподаватели вынуждены заполнять. Некоторые из них утверждали, что на написание совершенно ненужных бумаг уходит большая часть их рабочего времени. «Тут уж не до познавательной активности» – говорили они. Низкая комфортность деятельности низко оценена именно по этой причине.

Показатели познавательной активности не имеют большого числа связей друг с другом, однако получено 7 взаимосвязей (из 22-х возможных) на 99-процентном уровне достоверности.

Наибольшее число связей обнаружил показатель надситуативной активности. Он связан с волевыми усилиями, с самоорганизацией обучения и с интегрированием материала (Таблица 2).

Другие связи:

- волевые усилия – самоорганизация обучения;
- интерес к обучению – оценка его комфортности;
- самостоятельность в учебе – ее самоорганизация;
- и самоорганизация – интегрирование материала.

Наибольший вклад в диагностику познавательной активности в целом, судя по их связям с этим показателем, вносят (при достоверности 99% и более): самоорганизация процесса обучения ( $r = 0,64$ ); волевые усилия ( $r = 0,53$ ); и надситуативная активность ( $r = 0,49$ ).

Таблица 2. Достоверные связи компонентов познавательной активности  
Table 2 Reliable connections of cognitive activeness components

Показатели	1	2	3	4	5
1. Волевые усилия					
2. Интерес к обучению					
3. Самостоятельность в учебе					
4. Самоорганизация обучения	,55		,45		
5. Интегрирование материала				,43	
6. Надситуативная активность	,49			,59	,44
7. Комфортность обучения		,52			

$n = 36$ ; при  $r = 0,42$   $p \leq 0,01$

Пояснение: нули в коэффициентах корреляции удалены.

Соотношение познавательной активности и педагогических способностей преподавателей можно рассмотреть лишь по их обобщенным показателям. Однако таких взаимосвязей не обнаружено. Это позволяет предположить, что часть преподавателей успешна благодаря познавательной активности, а другая их часть – благодаря своим способностям.

Получено относительно мало связей между показателями адаптированности и успешности профессиональной деятельности преподавателей (Рисунок 1).



*Рисунок 1. Корреляционная плеяда показателей адаптированности и успешности деятельности (n = 36; при r = 0,33 p ≤ 0,05; при r = 0,42 p ≤ 0,01)*

*Figure 1 The universe of indicators for the adaptability and the successfulness of performance (n = 36; for r = 0.33 p ≤ 0.05; for r = 0.42 p ≤ 0.01)*

*Пояснение: показатели успешности размещены в рамке с двойной линией.*

Значения познавательной активности в педагогической деятельности отражены в таблице 3.

Познавательная активность оказывает сильное влияние на деятельность, но главным образом, на адаптированность к ней (на все, что в верхней части таблицы). Особенно организация собственного обучения и надситуативная активность.

Преподаватели, проявляя высокую познавательную активность, не столько повышают показатели успешности деятельности, сколько исполняют фасилитацию адаптации.

*Таблица 3. Связи познавательной активности с показателями адаптированности и успешности деятельности*

*Table 3 The links between cognitive activeness and the indicators of adaptability and the successfulness of performance*

Характеристики деятельности	Познавательная активность							
	1	2	3	4	5	6	7	8
Соответствие целей и результатов	<b>46</b>	<b>44</b>	39	<b>49</b>		40		<b>47</b>
Низкая «Стрессогенность»	32	33	<b>51</b>	<b>46</b>		35	35	<b>48</b>
Удовлетворенность деятельностью				<b>51</b>	<b>52</b>	<b>59</b>		<b>46</b>
<b>Адаптированность в целом</b>	<b>49</b>		<b>48</b>	<b>61</b>	34	<b>58</b>	41	<b>65</b>
Успешность (самооценка)		38					40	34
Образовательная успешность		35		<b>46</b>		35		41
Успешность воспитания		33	36					
Успешность развития учеников								
<b>Успешность деятельности в целом</b>	34	37		40			<b>44</b>	40

n = 36; при r = 0,33 p ≤ 0,05; r = 0,42 p ≤ 0,01

*Обозначения. 1. Волевые усилия. 2. Осознанный интерес к обучению. 3. Самостоятельность в постоянной учебе. 4. Самоорганизация процесса обучения. 5. Интегрирование учебного материала. 6. Надситуативная активность. 7. Комфортность учебной деятельности. 8. Познавательная активность в целом.*

*Пояснение: Пояснение: нули и запятые в коэффициентах корреляции удалены.*

Все показатели адаптированности преподавателей к своей деятельности являются зависимыми от компонентов познавательной активности. Кстати, гуманистическая психология фасилитацию удовлетворенности субъекта деятельностью и считает своей основной задачей.

Выявлены три типа преподавателей с помощью кластерного анализа:

- 1) направленные на успешность деятельности;
- 2) на сам процесс педагогической деятельности (работающие по принципу «так надо, надо соответствовать требованиям»);
- 3) увлеченные своей педагогической деятельностью, с повышенной активностью в подготовке и выполнении профессиональной деятельности, направленные на себя (по принципу «это интересно, мне нравится»).

Наиболее успешными являются преподаватели, относящиеся к первому типу. У них выражены гностические способности и преподаватели, используя их в процессе профессионального самосовершенствования, добиваются успехов своим трудом, не имея выраженных способностей.

У представителей второго типа свои плюсы. Они так же организованы в профессиональном совершенствовании, у них выражены способности к этой деятельности, они более удовлетворены деятельностью и более адаптированы.

В плане влияния на показатели деятельности нежелательным является принадлежность к третьему типу преподавателей. Они близки к типу, каждый представитель которого назван в житейской психологии «свободным художником».

Факторный анализ позволил выделить 3 фактора.

Фактор 1 имеет 20% дисперсии. Он включает в себя: мотивировку на сам процесс деятельности; надситуативную активность; мотивировку на контакты и общение; организацию собственной познавательной активности; самоорганизацию процесса постоянного обучения; удовлетворенность деятельностью; адаптированность к ней; проявление волевых усилий; интеграцию знаний в процессе обучения; диагностические способности; научно-практические способности; низкую оценку «стрессогенности» деятельности; способности к самосовершенствованию и к повышению мотивировки учащихся. Это фактор направленности на профессию и на самосовершенствование посредством познавательной активности.

Фактор 2 при дисперсии 13% включает в себя: осознанный интерес в познавательной активности; способности к планированию; оценку соответствия целей и результатов деятельности; оценку мотивов к материальному вознаграждению; комфортность от процесса познания.

Это фактор направленности на деятельность по интересу. Во 2-й фактор ни один из показателей успешности деятельности не попал. Более того,

в него вошел и лишь один показатель адаптированности – оценка соответствия целей и результатов своей деятельности.

Фактор 3. Общая дисперсия 12%. Он включает в себя: успешность деятельности в целом; успешность образовательной деятельности; успешность выполнения функций воспитания студентов; успешность профессиональной деятельности, по самооценке; способности к педагогической деятельности в целом; способности (их сводный показатель); способности в их интегрированном проявлении, по данным эксперимента; способности к выполнению функций развития учащихся.

Данный фактор можно уверенно назвать фактором направленности на успешность педагогической деятельности по способностям.

Полученные результаты соотносятся с результатами кластерного анализа и позволяют заключить, что в последипломном самостоятельном или организованном обучении нуждаются преподаватели, направленные на совершенствование 1-го типа (потому, что так надо) и 2-го – (потому, что это интересно).

В целом, полученные результаты показывают, что повышать уровень познавательной активности необходимо каждому преподавателю. Однако вряд ли целесообразно это делать за счет наращивания различных курсов повышения квалификации. Необходимо создание условий преподавательской деятельности для самостоятельного мотивирования педагогов высшей школы к собственному профессиональному росту.

### **Заключение** *Conclusions*

Результаты эмпирического исследования позволили выявить основные группы мотивов преподавательской деятельности: мотивы на сам процесс педагогической деятельности; на возможность широкого общения; на самосовершенствование. Слабо выражены мотивы: высокого социального статуса; мотивы на результат деятельности; на материальное вознаграждение. Как антимотивы выступают: высокие учебные нагрузки; отсутствие времени для подготовки к занятиям; необходимость работы более чем на одну ставку.

Компоненты познавательной активности выражены разнообразно, при этом коэффициенты вариации относительно невысокие. К числу наиболее выраженных компонентов познавательной активности относятся: интегрирование учебного материала и надситуативная активность. Наименее выражены: комфортность учебной деятельности; волевые усилия; и самоорганизация процесса обучения. Показатель надситуативной активности наиболее тесно связан с волевыми усилиями, с самоорганизацией обучения

и с интегрированием материала. Не обнаружено связей познавательной активности и педагогических способностей. Это позволяет предположить, что часть преподавателей успешна благодаря познавательной активности, а другая их часть – благодаря своим способностям.

Познавательная активность оказывает сильное влияние на деятельность, но главным образом, на адаптированность к ней. Преподаватели, проявляя высокую познавательную активность, не столько повышают показатели успешности деятельности, сколько исполняют фасилитацию адаптации. Все показатели адаптированности преподавателей к деятельности являются зависимыми от компонентов познавательной активности.

Выявлены три типа преподавателей: направленных на успешность деятельности, на сам ее процесс и на увлеченные своей педагогической деятельностью. Наиболее успешными являются преподаватели, относящиеся к первому типу. У них выражены гностические способности и используя их в процессе профессионального самосовершенствования, добиваются успехов своим трудом, не имея выраженных способностей.

### **Summary**

The results of the empirical study have revealed the main groups of teaching motives, mainly: for the pedagogical activity process; for the possibility of wide communication; for self-improvement. The motives that do not manifest themselves strongly are: for high social status; for the result of the activity; for material reward. The demotivation process is connected to: the excessive work load; the lack of time to prepare classes; the need for extra work load.

The components of cognitive activeness are quite diverse, while the coefficients of variation are relatively low. The most strongly marked components of cognitive activeness include the integration of the educational material and supra-situational activity, while the least expressed are the comfortability of learning performance, the strong-will efforts, and the learning process self-organization. The indicator of supra-situational activity is most closely associated with will efforts, with training self-organization, and with the material integration. No associations between cognitive activeness and pedagogical abilities have been found. There is no evidence to suggest that there is a connection between cognitive activeness and teaching abilities. It allows to conclude that some teachers are successful due to their cognitive activeness, and others are successful due to their abilities.

Cognitive activeness has a strong influence on the performance, especially on performance (activity) adaptability. The teachers, who show intense cognitive activeness, do not increase as much performance indicators as they perform adaptation facilitation. All indicators of teachers' adaptability to their performance are dependent on the components of cognitive activeness.

Three types of teachers have been identified: those who are motivated to the success of their performance; those who are motivated to the process itself; and those who are motivated to the increase of their teaching performance.

The most successful teachers are those of the first type. They explicitly show gnostic abilities, and they use them for the process of professional self-improvement in order to achieve success by performing their work, though even not having expressed abilities.

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## К ВОПРОСУ О ПОДГОТОВКЕ КУРСАНТОВ В ВУЗАХ УГОЛОВНО-ИСПОЛНИТЕЛЬНОЙ СИСТЕМЫ К АНТИКОРРУПЦИОННОЙ ДЕЯТЕЛЬНОСТИ

### *On the Issue of Training Cadets in Universities of the Penal System for Anti-corruption Activities*

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**Abstract.** Service in the penal correction system refers to activities with specific corruption risks associated with empowering employees to execute criminal sentences. This requires special training and professional development, motivation, special competencies and values that can effectively combat corruption.

A generalization of the results of the theory, methodology and practice of preparing for anti-corruption activities made it possible to identify and justify the principles of training cadets at higher educational institutions of the UIS for anti-corruption activities. The methodological basis for the development of a theoretical justification for preparing cadets for anti-corruption activities was the humanistic, systemic, axiological and activity approaches.

The preparation of cadets of UIS universities for anti-corruption activities requires the formation of a system of values and value orientations that determine their informed choice of anti-corruption behavior and make official activities resistant to external factors and influences. The effectiveness of preparing cadets for anti-corruption activities is achieved by the consistency of the formed value orientations, the emerging needs for their satisfaction and the integrity of law-abiding behavior. The content of training cadets should be consistent and aimed at developing qualities that will allow them to effectively perform their duties in conditions of increased corruption risks.

**Keywords:** anti-corruption behavior, corruption risks, principles of preparation for anti-corruption activities.

## **Введение** *Introduction*

Современная ситуация многочисленных нарушений законности и проявлений коррупции во властных структурах требует поиска системных решений по разработке проблемы противодействия коррупционным проявлениям на уровне совершенствования применения нормативных актов, введения мер контроля и профилактики заставляет нас обратиться к возможностям педагогической науки при подготовке специалистов в вузах уголовно-исполнительной системы (далее – УИС).

Вузы УИС готовят курсантов к деятельности по исполнению уголовных наказаний, обеспечению правопорядка, законности и безопасности. Для эффективной реализации возложенных задач в УИС установлены квалификационные требования к специальной профессиональной подготовке выпускников вузов, а также порядок организации и осуществления образовательной деятельности по основным профессиональным образовательным программам. Специфика прохождения службы в УИС обуславливает направленность подготовки курсантов по соответствующим специальностям и направлениям подготовки с учетом текущей потребности в кадрах, возлагаемых служебных задач и специфических условий прохождения службы.

Согласно выводам исследований И.М. Мацкевича и И.И. Аминова (Maskevich & Aminov, 2016). на сегодняшний день коррупциогенными являются практически все стороны деятельности УИС, что обуславливает направленность подготовки курсантов на формирование особых профессиональных качеств. Основопологающим условием правопослушной профессиональной деятельности сотрудника УИС является выявление, оценка и минимизация коррупционных рисков, факторов и причин, способствующих их возникновению.

Коррупционные риски в УИС будут возникать всегда. Поэтому с нашей точки зрения необходимо формирование особых позиции, направленных на устойчивое противодействие коррупции. Наша позиция заключается в том, что для эффективной правопослушной профессиональной деятельности сотрудника в условиях повышенных коррупционных рисков требуется особая предупредительная работа - подготовка курсантов в вузах УИС, направленная на формирование личностных качеств, мотивов, специальных компетенций и ценностей, позволяющих эффективно противодействовать коррупции. Единые общественно значимые мотивы должны обуславливать деятельность сотрудника в различных сферах, стимулируя ее и придавая личностный смысл (Feoktistova, 2014).

Важно отметить, что только наличие знаний, умений и навыков в области противодействия коррупции у должностного лица не всегда приводит к желаемому результату. Как отмечает В. Амукова, при реализации антикоррупционных мер признается неспособность человека достичь полного контроля своих мыслей, желаний и потребностей. Антикоррупционная подготовка должна укреплять способность сотрудников поступать осознанно, быть внимательными и бдительными при исполнении служебных обязанностей, формировать рациональную способность противостоять различным искушениям (Амукова, 2013).

Таким образом, целью статьи является теоретическое, методологическое и методическое обоснование антикоррупционной подготовки, основанное на анализе опыта антикоррупционных проявлений и адаптированности к специфике конкретных должностных обязанностей и структуре реализуемых коррупционно-опасных функций.

### **Материалы и методы** *Materials and methods*

Наше исследование проводилось в рамках деятельности УИС, в учреждениях которой по состоянию на 1 марта 2019 г. содержится более 558 тыс. обвиняемых, подозреваемых и осужденных. Штатная численность сотрудников составляет около 225 тыс. Численность обучаемых в УИС курсантов в 7 учреждениях высшего образования с 1 филиалом составляет 5 910 чел.

Эмпирическими материалами для исследования послужили данные о причинах и условиях совершения более 750 коррупционных правонарушений в УИС в период с 2011 по 2018 гг.

Исследование теории и практики антикоррупционной деятельности в УИС строилось нами на основе использования комплекса методологических подходов. Гуманистический подход определил направленность подготовки к антикоррупционной деятельности на гармоническое развитие личности курсантов, актуализацию их духовных сил, способностей и умений. С помощью системного подхода оценена и определена взаимосвязанность поставленной проблемы формирования у курсантов антикоррупционного поведения и содействия пресечению коррупционного поведения в профессиональной деятельности, построения программы подготовки, процедуры реализации и оценки получаемых знаний и формируемых компетенций, а также мотивации курсантов к противодействию коррупции. Положения аксиологического подхода легли в основу обоснования необходимости формирования у курсантов ценностей и ценностных ориентаций, определяющих осознанное

антикоррупционное поведение и пресечение такого поведения в профессиональной деятельности (Yahya, Yean, Johari, & Saad, 2015). Деятельностный подход использовался для определения структуры организации служебной деятельности в условиях морального и правового решения, выбора поведения при возникновении коррупционных рисков.

## **Результаты** **Results**

Вуз УИС при подготовке курсантов обеспечивает реализацию соответствующих федеральных государственных образовательных стандартов высшего образования и ведомственных нормативных правовых актов, регламентирующих деятельность УИС и профессиональные требования к соответствующим должностным категориям сотрудников. Выбор методов и средств обучения, образовательных технологий и учебно-методического обеспечения реализации образовательных программ осуществляется вузом УИС самостоятельно, исходя из необходимости достижения обучающимися курсантами планируемых результатов.

Нормативные правовые акты, регламентирующие подготовку курсантов в вузах УИС и порядок прохождения службы, позволяют сформулировать в качестве задачи подготовки курсантов к антикоррупционной деятельности, формирование качеств, определяемых специальными квалификационными требованиями, особо важных для последующей организации служебной деятельности в условиях коррупционных рисков. Эти требования включены в образовательные программы подготовки в качестве требований, специальных компетенций - способности к антикоррупционному поведению и пресечению коррупционного поведения в профессиональной деятельности.

Определение целью подготовки курсантов вузов УИС к антикоррупционной деятельности антикоррупционное поведение и пресечение такого поведения в профессиональной деятельности требует формирования у них в период обучения системы ценностей и ценностных ориентаций, которые определяют самостоятельный осознанный выбор курсантом из различных возможных вариантов антикоррупционного поведения, делают служебную деятельность устойчивой к внешним факторам и влияниям (Lisieviči & Andronie, 2016).

Зарубежные исследователи справедливо ставят эффективность подготовки к антикоррупционному поведению в зависимость от сформированности моральных ценностей, а также подчеркивают необходимость системного подхода к решению проблемы противодействия коррупции, продумывания разных факторов влияния на

формирование антикоррупционного поведения обучающихся. Так, Hamdun I. Sulayman обосновывает в своей работе (Sulayman, 2014) - необходимость проникновения идеи освоения моральных ценностей в преподавание всех предметов, чтобы обучаемые впоследствии могли противостоять возможности безнравственного поведения. К. Комаласари, Д. Сарипудини в качестве условий эффективной реализации ценностей антикоррупционной подготовки определяют, что понятия и смыслы противодействия коррупции должны интегрироваться в содержание учебной программы и основываться на контекстном подходе к обучению (Komalasari & Saripudin, 2015).

Анализ и обобщение исторического и философского знания, нормативных правовых актов в сфере противодействия коррупции и организации УИС, зарубежного опыта позволили уточнить структуру и содержание ценностей, определяющих антикоррупционную деятельность, определить ценностные ориентации антикоррупционной деятельности как систему фиксированных ценностей, лежащих в основе устойчивого отказа сотрудника УИС от вступления в коррупционные отношения и активного противодействия коррупции.

Ценностные ориентации существенным образом формируются в процессе образования и познания. Они обнаруживаются в целях, идеалах, убеждениях, интересах и других проявлениях личности. Ценностные ориентации на противодействие коррупции, являясь высшим уровнем саморегуляции антикоррупционного поведения, логически не должны противоречить более низшим уровням иерархии (Sabic-El-Rayess & Mansur, 2016; Sârbu, 2015). Они должны согласовываться на уровне формирования потребностей и непротиворечивости деятельности по оценке возникающих ситуаций и деятельности по удовлетворению потребностей.

Опираясь на научные разработки В.А. Ядова (Jadov, 2013) о диспозиционной иерархии поведения как продукте столкновения потребностей и ситуаций (условий), мы определили, что подготовка курсантов к антикоррупционной деятельности достигается соответствием уровней иерархии поведенческой системы:

- элементарных фиксированных установок, не осознаваемых курсантом;
- социальных установок на основе оценивания курсантом себя как гражданина, сотрудника и т.д.;
- общей (доминирующей) направленности интересов личности курсанта на основе сформированной потребности и идентификации себя как сотрудника УИС, имеющего

определенные обязанности и несущего соответствующую ответственность;

- ценностными ориентациями на цели жизнедеятельности и средства их достижения, обоснованные высшими социальными потребностям курсанта в саморазвитии и самовыражении.

Таким образом, эффективность подготовки курсантов к антикоррупционной деятельности достигается непротиворечивостью сформированных ценностных ориентаций, возникающих потребностей для их удовлетворения и целостности правопослушного поведения.

Анализ реализуемых образовательных стандартов, учебных дисциплин позволяет разработать порядок внедрения подготовки к антикоррупционной деятельности в изучение большинства дисциплин. Особое внимание требуется уделять методике преподавания, построения плана преподавания учебной дисциплины (занятия) в рамках выделенных компонентов антикоррупционной деятельности в контексте условий будущей профессии.

В рамках учебной деятельности в вузе УИС подготовка к антикоррупционной деятельности предполагает следующие знания:

1. Формирование способности антикоррупционного поведения:
  - состояние проблемы коррупционных отношений;
  - истоки, понятия и смыслы коррупционных отношений.
  - нормативное правовое регулирование противодействия коррупции;
2. Формирование способности к пресечению коррупционного поведения в профессиональной деятельности:
  - типичные коррупционные риски в деятельности УИС;
  - направления профилактики противодействия коррупции в УИС;
  - алгоритм действий при возникновении коррупционных рисков.

При проведении отдельного занятия, темы, блока тем и учебной дисциплины требуется акцентировать внимание на формировании соответствующих специальных компетенций. В вариативной части учебного плана при подготовке курсантов в вузе УИС необходимо предусмотреть специальную дисциплину (например, «Антикоррупционная деятельность в УИС» и др.) для формирования способности противодействовать коррупции, выполнять профессиональные задачи в соответствии с нормами морали, профессиональной этики и служебного этикета.

Проведение учебных занятий должно быть направлено на формирование ценностных ориентаций курсантов на подготовку к антикоррупционной деятельности, а также контекстную подготовку по освоению опыта такой деятельности, и включать:

- выстраивание логики субъективного оценивания курсантами предметов и явлений на уровне элементарных установок, социальных установок, направленности интересов, целей служебной деятельности и жизненных целей;
- моделирования ситуаций возможных коррупционных рисков, выбор наиболее рациональных и соответствующих закону альтернатив поведения;
- формирование оценочного эквивалента эффективности поступка, действия и направленности поведения в рамках выполнения целей и задач УИС;
- формирование служебного поведения как выражения осознанности курсанта, понимания им своего места в УИС и перспективных возможностей для самореализации;
- отработку поведенческих актов по типичным ситуациям возникновения коррупционных рисков, привычных действий по противодействию коррупции, служебного поведения по предотвращению коррупционных рисков и порядку действий при их реальном возникновении;
- формирование целостного поведения сотрудника УИС в условиях повышенных коррупционных рисков.

Таким образом, направленность образовательной деятельности вуза УИС на реализацию компонентов антикоррупционной деятельности структурирует проводимые учебные действия. Процесс формирования у курсантов специальных компетенций по способности к антикоррупционному поведению и пресечению коррупционного поведения в профессиональной деятельности начинает носить прогнозируемый и управляемый характер.

### **Обсуждение результатов**

#### ***Discussion of results***

Как нами отмечалось ранее, непреложное профессиональное требование обеспечения законности и правопорядка сотрудниками УИС обуславливает особые требования к их подготовке и особую роль каждого из них. При этом сотрудник УИС должен обладать специальными компетенциями, позволяющими организовывать служебную деятельность в условиях повышенных коррупционных рисков.

Планирование подготовки курсантов к антикоррупционной деятельности требует пошаговой детализации действий субъектов образовательного процесса. При этом крайне сложно оценить и предвидеть степень влияния внешних факторов на выбор предпочтения определенного действия в процессе реальной целостной профессиональной деятельности. Комфорт, благополучие, безопасность – это первичные потребности каждого человека. Их удовлетворение, хотя бы даже на минимальном уровне, необходимо для каждого человека, в том числе и сотрудника УИС.

Обобщение результатов теории, методологии и практики подготовки к антикоррупционной деятельности позволили выделить и обосновать основные положения, вытекающие из определенных закономерностей образовательного процесса, которые легли в основу сформулированных нами принципов подготовки курсантов в вузах УИС к антикоррупционной деятельности:

1. Гуманистический характер подготовки выражается в раскрытии и формировании ценностной основы личности курсанта, ее интеллектуального, нравственного, творческого потенциала, что отразится в способности свободно ориентироваться в сложных социальных и профессиональных ситуациях, предупреждать коррупционные риски, выбирать нравственное поведение.
2. Системность реализации компонентов антикоррупционной деятельности - требует целенаправленных взаимосвязанных педагогических действий субъектов образовательного процесса по формированию в период обучения у курсантов способности к антикоррупционному поведению и содействие пресечению такого поведения. Встраивание подготовки курсанта к антикоррупционной деятельности в систему управления вузом УИС, содержание образовательной деятельности, методическую работу, библиотечно-информационное обеспечение, подготовку педагогических работников и других сотрудников вуза, научно-исследовательскую деятельность, организации сотрудничества, организации воспитательной работы.
3. Контекстность подготовки к деятельности в условиях коррупционных рисков, использование в подготовке анализа конкретных ситуаций наполняет образование курсантов личностным смыслом, обуславливает высокий уровень их активности, осознанности, познавательной и профессиональной мотивации. Это обеспечивает переход образовательной деятельности курсанта в профессиональную деятельность сотрудника и выражается в наложении усвоения курсантами теоретических знаний, предусмотренных соответствующей

специальностью (направлением подготовки) на «канву» особенностей усваиваемой ими профессиональной деятельности, предполагающей осознанное предупреждение такого поведения в профессиональной деятельности.

### **Заключение** *Conclusions*

Отнесение службы в УИС к деятельности с коррупционными рисками связано с повышенным уровнем субъективности принятия сотрудником юридически значимых решений, а также изменением системы ценностей сотрудника, вызванной профессиональной деформацией.

Для организации исполнения служебных обязанностей в условиях повышенных коррупционных рисков требуется особая подготовка курсантов в вузах УИС, направленная на формирование личностных качеств, мотивов, специальных компетенций и осознание механизмов, позволяющих эффективно противодействовать коррупции. Превалирование корыстных мотивов над требованиями служебного долга определяется принятием сотрудником УИС субъективной вероятности достижения успеха для удовлетворения своих потребностей.

Перспективными направлениями реализации подготовки к антикоррупционной деятельности определяются: восприятие обучаемыми того, что правильно и ценно на практике, формирование правосознания обучаемого в части способности к антикоррупционному поведению, практики противодействия коррупции, выбора вариантов поведения в условиях морального и правового решения.

Повышение эффективности подготовки к антикоррупционной деятельности требует систематизации получаемых знаний в рамках преподаваемых в вузе УИС дисциплин и разработки специальной дисциплины, а также внеучебной работы. Требуется разработки и уточнения системы планирования и структурирования проводимых мероприятий, организации в вузе антикоррупционной среды. Содержание подготовки курсантов должно быть непротиворечиво и направлено на формирование качеств, которые позволят эффективно исполнять служебные обязанности в условиях повышенных коррупционных рисков.

### **Summary**

The current situation of numerous violations of the law and manifestations of corruption in government requires a search for systemic solutions to develop the problem of combating corruption.

The specifics of serving in the penal correctional system determines the orientation of the training of cadets in the relevant specialties and areas of training, taking into account the current need for personnel, assigned service tasks and specific conditions of service. Only the presence of knowledge, skills in the field of combating corruption with an official does not always lead to the desired result. Anti-corruption training should strengthen the ability of employees to act consciously, be attentive and vigilant in the performance of their duties.

The aim of the article is the theoretical, methodological and methodological substantiation of anti-corruption training, based on the analysis of the experience of anti-corruption manifestations and adaptation to the specifics of specific job duties and the structure of the implemented corruption-hazardous functions. When preparing cadets, the UIS University ensures the implementation of the relevant federal state educational standards of higher education and departmental regulatory legal acts governing the UIS and professional requirements for the respective official categories of employees. The choice of teaching methods and means, educational technologies and educational and methodological support for the implementation of educational programs is carried out by the higher educational institution of higher education independently, based on the need for students to achieve the planned results. The effectiveness of preparing cadets for anti-corruption activities is achieved by the consistency of the formed value orientations, the emerging needs for their satisfaction and the integrity of law-abiding behavior.

Analysis of implemented educational standards and academic disciplines allows us to develop a procedure for introducing preparation for anti-corruption activities in the study of most disciplines. Particular attention must be paid to the teaching methodology, building a plan for teaching a discipline (class) within the framework of the identified components of anti-corruption activities in the context of the conditions of a future profession.

As part of the educational activities at the UIS institution, preparation for anti-corruption activities involves the following knowledge:

1. The formation of the ability of anti-corruption behavior:- the state of the problem of corruption relations;
  - the origins, concepts and meanings of corruption relations.
  - normative legal regulation of anti-corruption;
2. The formation of the ability to suppress corrupt behavior in professional activities:
  - typical corruption risks in the activities of the penal system;
  - directions for the prevention of anti-corruption in the penal system;
  - an algorithm of actions in the event of corruption risks.

The focus of the educational activities of the UIS institution on the implementation of the components of anti-corruption activities structures the ongoing educational activities. The process of the formation of special competencies among cadets for their ability to anti-corruption behavior and the suppression of corrupt behavior in professional activities begins to be predictable and manageable.

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# МОТИВЫ И МОТИВАЦИЯ СТУДЕНТОВ ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЙ К НАУЧНО- ИССЛЕДОВАТЕЛЬСКОЙ ДЕЯТЕЛЬНОСТИ И ПУТИ ЕЕ ПОВЫШЕНИЯ

## *Motives and Motivation of Students of Higher Educational Institutions to Research Activity and Ways of Its Increase*

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**Abstract.** *This article examines and summarizes the views of the authors involved in the study of student participation in research activities. The concept of "motivation for research activity" is specified, the content of scientific research as a special type of intellectual activity of a person is characterized. Further, the authors on the basis of the method of interviewing collected, analyzed and summarized the material, which allowed to identify the motives that encourage students of higher educational institutions to participate in activities of a scientific and research nature. The main motives were defined: the remunerations received by the student as a result of participation in scientific research; the desire to realize the existing abilities for scientific activity; disclosure of other abilities or satisfaction of other needs for which research activity is a means to achieve goals. Also, the authors identified the lack of interest on the part of students to research activities, formulated and justified the reasons for the lack of motivation of students to this activity. According to the results of the study, recommendations were developed, the introduction of which in the educational process will increase the motivation of students to research activities carried out independently or under the guidance of experienced teachers and researchers of higher educational institutions.*

**Keywords:** *motivation of students, research activities, motives for research.*

### **Введение**

### **Introduction**

Традиционно в процессе подготовки студентов высших учебных заведений к самостоятельной практической деятельности на первое место ставилась учебная деятельность, как деятельность позволяющая получить знания, освоить необходимые базовые навыки будущей профессии. Но в последнее время все больше внимания уделяется научно-исследовательской

деятельности (НИД) студентов не только, как вспомогательному процессу, позволяющему лучше усвоить учебные дисциплины, но и как деятельности, имеющей самостоятельную ценность для подготовки будущих профессионалов, умеющих разрабатывать новые способы постановки и решения сложных задач. Но если мотивация к учебной деятельности относительно изучена и понятна, так как именно ради приобретения знаний, умений и навыков абитуриент поступает в учебное заведение, то мотивация к НИД изучена не в полной мере, что и обусловило актуальность данного исследования.

В связи с заявленной актуальностью и темой статьи в качестве основной цели выступает обоснованное выявление мотивов студентов ВУЗов к НИД, а также рекомендации по повышению мотивации к НИД на основе анализа и обобщение причин недостаточно высокой мотивации, имеющей место в настоящее время. Для целей исследования были использованы методы обобщения научной литературы, интервьюирования студентов, обобщения и сравнения полученных результатов.

### **Обзор литературы** *Literature review*

В контексте данного исследования под научно-исследовательской деятельностью студентов будем понимать особый вид относительно самостоятельной творческой и познавательной деятельности, направленной на овладение современными методами научного исследования, включающего как теоретические разработки, так и проведение научных экспериментов. Учитывая важность на современном этапе подготовки будущих специалистов, умеющих выявлять новые проблемы, ставить нестандартные цели и задачи, интерес к участию студентов в НИД в последние годы растет. И, соответственно, растет интерес авторов к вопросам вовлеченности студентов в научные исследования, мотивации к научной деятельности. В частности, Н.А. Абрамова, характеризуя подготовку студентов специального (дефектологического) образования, уточняет, что НИД занимает особое место среди видов профессиональной деятельности студента. Автор подчеркивает, что в настоящее время НИД студентов трактуется несколько односторонне, без связи с образовательным процессом и будущей профессией. В связи с этим Н.А. Абрамова считает, что участие студентов в научных исследованиях должно заключаться в овладении ими такими компонентами, как мотивационный, содержательно-деятельностный и рефлексивный. В связи с этим автор отмечает, что первичным для осуществления НИД является мотивационный компонент (Abramova, 2018). Стоит отметить, что мотивация как явление и как процесс

изучалась многими отечественными и зарубежными авторами (Piin, 2012; Weiner, 1972).

Учитывая данное обстоятельство и предмет исследования настоящей статьи, рассмотрим какой смысл вкладывается в понятие «мотив». Н.А. Мамаева отмечает многозначность категории «мотив», который наделен функциями направления деятельности, ее регуляции; мотив также, с точки зрения данного автора, наделен смыслообразующей функцией. Ссылаясь на точки зрения других ученых Н.А. Мамаева, изучая мотивы к учебной деятельности, отмечает, что мотивом учебной деятельности является направленность на отдельные стороны учебной работы с учетом отношения к ней. Под мотивацией к учебной деятельности Н.А. Мамаева понимает процесс, метод и средство обучаемых к продуктивной познавательной деятельности (Мамаева, 2007).

В.П. Сорихина на основе обобщения мнений авторов ряда периодов развития педагогики и психологии отмечает, что понимание мотивов в разных науках дифференцировано. В частности, в психологии основной упор делается на то, что «мотив» – это динамический процесс, управляющий поведением человека или еще более известное представление о мотиве, как об «определенной потребности». В педагогике же под мотивом, как правило, понимают побуждение личности к тому или иному виду активности, в основе которого лежит удовлетворение потребности. В социологии мотиву отводят роль осознанной потребности субъекта в достижении определенных целей (Sorihina, 2017).

Интересным представляется мнение Е.П. Ильина, П.И. Чернецова и И.В. Шадчина, считающих, что мотив – это сложное образование, которое представляет собой динамическую систему, в рамках которой осуществляется анализ и оценка альтернатив, выбор и принятие решений. И, соответственно, под мотивацией, авторы понимают совокупность внутренних и внешних движущих сил, побуждающих индивида к определенной деятельности, придающих направленность деятельности на достижение определенных целей (Piin, 2012; Chernecov & Shadchin, 2016). Принимая во внимание вышеприведенные точки зрения, в данном исследовании под мотивами студентов к НИД будем понимать стремление к удовлетворению определенной потребности, в основе которой лежит специфическое умозаключение по осознанию этой потребности. В данном случае к потребностям можно отнести работу в научном коллективе, получение более высокой оценки по определенной дисциплине. Мотивацией же к НИД студентов будем считать внутреннее побуждение к поведению определенного типа, выполнению определенных функций в рамках научно-исследовательской деятельности.

Изучению мотивов студентов к НИД посвящен ряд научных работ. Например, результаты исследования, проведенного Д.М. Ефимовой, Д. Халитовой и К. Мухаметшаевой свидетельствуют, что основными мотивами студентов являются получение дополнительных баллов при сдаче экзаменов, повышение творческого рейтинга, получение дипломов или денежного вознаграждения. Причем, все опрошенные данными авторами студенты ответили, что наука, как область знаний их интересует, но участвовала в научных мероприятиях лишь половина опрошенных (Efimova, Halitova, & Muhametshaeva, 2015). Подобные результаты получены и при исследовании, проведенном Н.А. Абрамовой: 46% опрошенных занимаются научными исследованиями ради получения бонусных баллов для аттестации; 18% – с целью получать повышенную стипендию; 23% студентов видят в НИД возможность участия в конференциях в других регионах; 13% занимаются научными исследованиями с целью получения нового знания и саморазвития (Abramova, 2018). В.В. Семченко, О.М. Гуртовенко, Г.Г. Левкин отмечают, что, на их взгляд, НИД не является популярной у современных студентов и участвуют в ней они, скорее, в виде исключения. Объясняют авторы данную ситуацию тем, что научная деятельность не приводит к быстрому получению финансового результата (Semchenko, Gurtovenko, & Levkin, 2017). Согласимся с данными авторами относительно того, что результаты научной деятельности студентов в вузе с экономической точки зрения – это скорее долговременные вложения в человеческий капитал, чем возможность получить сиюминутный финансовый результат.

Исследование, проведенное Н.В. Козловой и Д.В. Луковым, в котором принимали участие 250 студентов (при возможности выбрать несколько из предложенных ответов), дает основания полагать, что хотя мотив, связанный с приобретением более глубоких знаний, имеет значение для большей доли опрошенных (54,7%), чем у предыдущих исследователей, тем не менее, доминирующим мотивом все же является возможность более успешно пройти аттестацию (60%). Но несмотря на то, что исследование данных авторов показало, что получение интеллектуального удовлетворения является также довольно значимым мотивом (41,2% опрошенных), тем не менее, более 50% опрошенных не представляют целей НИД и возможностей ее применения на практике (Kozlova & Lukov, 2007).

Совсем иной результат получен Е.В. Реутовым, Л.В. Колпиной, М.Н. Реутовой и Е.Н. Шияновой. Согласно результатам проведенного исследования мотивов студентов к НИД, возможность самореализации, интерес к познанию важен для 54,8% респондентов; общение с интересными людьми отметили 45,2% студентов; далее 35,6 % отметили, что такого рода деятельность дает возможность более успешно овладеть

своей специальностью, 25% – возможность приобретения опыта профессиональной деятельности; и только на пятом месте данными студентами был указан мотив удачной защиты дипломной работы, то есть мотив, связанный с получением практической пользы в учебной деятельности (23,1 %). Такое отличие результата исследования данных авторов от результатов, полученных авторами, упомянутыми в предыдущих абзацах, обусловлено тем, что в данном случае были опрошены студенты, уже занимающиеся некоторое время НИД (Reutov, Kolpina, Reutova, & Shijanova, 2012). Не вовлеченные в НИД студенты, как правило, интересуются тем, что она может им дать в более практическом смысле: «бонусы» или упрощенная система прохождения аттестации, формирование положительного отношения со стороны преподавателей, то есть, как правило, доминируют прагматические мотивы.

Разумеется, большинство авторов, интересующихся заявленной в теме статьи проблемой, изучали и причины недостаточной сформированности определенных мотивов у студентов, причины отсутствия и низкой мотивации к НИД. Среди вышеназванных причин авторами отмечены: 1) недостаточное развитие потребности в научной самореализации, чтобы сформировался необходимый мотив; 2) несоответствие состояния и развития материально-технической базы ВУЗа; 3) возможность участвовать преимущественно в научных конференциях в ущерб другим формам представления результатов научной работы (Reutov et al., 2012). П.И. Чернецов и И.В. Шадчин отмечают, что причинами недостаточной мотивации также могут быть: 1) трудности при организации НИД; 2) недостаточное внимание к созданию условий для стимулирования мотивации к НИД (Chernecov & Shadchin, 2016).

Среди рекомендаций по повышению уровня мотивации можно найти такие, как повышение активности студентов на базе развития личностных и профессиональных качеств; ознакомление с основами НИД; проведение мотивационных тренингов, встреч с молодыми учеными (Kozlova & Lukov, 2007); создание в вузе среды, способствующей перерастанию определенных потребностей студентов в научно-исследовательский мотив; повышение престижа НИД; формирование институциональной инфраструктуры для занятия студентами наукой; формирование атмосферы научного сотрудничества преподавателей и студентов; установление прямой и обратной связи, заключающейся в информировании студентов и преподавателей о новых возможностях реализации своих способностей в сфере науки (Sorihina, 2017).

## **Методология** *Methodology*

Авторы осуществили исследование в два этапа. На первом этапе проводилось кабинетное исследование, предполагающее сбор и анализ информации из доступных источников сети Интернет и публикаций трудов авторов, занимающихся соответствующей проблемой, в научных журналах и иных изданиях. На данном этапе были применены методы сравнения, обобщения мнений авторов.

На втором этапе были проведены полевые исследования, предполагающие применение метода интервьюирования для выявления мотивов студентов ВУЗов к НИД, а также причин недостаточно высокой мотивации к этой деятельности. В отличие от большинства авторов, чьи точки зрения приведены выше, авторы данной статьи воспользовались интервью, как методом выявления реального отношения студентов к НИД, полагая, что собственные формулировки, а не ответы на вопросы предполагают самостоятельную диагностику отношения студентов к научной деятельности, поощрение их мыслительного процесса, что будет способствовать дополнению результатов исследований, полученных другими авторами. Интервью проводилось с 45 студентами, обучающимися по направлению «Менеджмент» в Псковском государственном университете. Для данного процесса были отобраны студенты, не занимавшиеся ранее НИД, но имеющие определенное представление о данном виде деятельности. Далее авторами статьи осуществлено обобщение полученных результатов, сравнение и классификация мнений по группам с дальнейшим формированием выводов. В процессе обработки результатов также применялись методы статистической обработки результатов.

## **Результаты исследования** *The results of research*

В целях дополнения, углубления и развития результатов, полученных вышеназванными авторами, нами были получены следующие результаты научного исследования:

- 1) на основе интервьюирования были выявлены причины недостаточной мотивации студентов к НИД;
- 2) отталкиваясь от видов мотивов, выявленных у разных групп студентов, были обоснованы проблемы, мешающие сформироваться более высокой мотивации у студентов и предложены направления работы с ними со стороны преподавателей или научных сотрудников ВУЗов.

Интервьюирование проводилось следующим образом. Сначала студентам было предложено самим сформулировать причины нежелания участвовать в НИД, затем на основе предварительного обобщения результатов исследований, проведенных другими авторами, и мнений, озвученных студентами, был сформулирован общий перечень причин недостаточно высокой мотивации к НИД студентов, обучающихся по направлению «Менеджмент». Причем, по условиям проводимого исследования каждый студент мог выбрать несколько причин, которые на его взгляд оказывают влияние на личную мотивацию к НИД или мотивацию других студентов. Далее общее количество студентов было принято за 100%, а количество ответов на каждый вопрос было вычислено, как удельный вес в общем количестве участников.

К причинам недостаточной мотивации, выявленным в результате интервьюирования студентов, можно отнести следующие (в скобках указан удельный вес респондентов, выбравших данную причину):

- 1) студент считает себя и так достаточно загруженным, чтобы, как он считает, занимать свое время НИД (67%);
- 2) студент не чувствует уверенности в получении положительного результата, то есть не уверен в наличии у него соответствующих способностей (62%);
- 3) отсутствие критичности мышления, как необходимого элемента научной деятельности (62%);
- 4) научная деятельность, как правило, не является частью учебного плана и мало влияет на результаты аттестации (58%);
- 5) нежелание быть в центре внимания даже небольшой команды, занимающейся одной НИД, и, естественно, нежелание быть в центре внимания более широкого круга лиц (51%);
- 6) недостаточно понятна организация НИД, в том числе сроки осуществления научных проектов и необходимое время для их реализации (51%);
- 7) НИД под руководством преподавателя, интересующего студента с точки зрения темы научных исследований может никак не повлиять на результаты учебы студента, если преподаватель не преподает в его группе и не руководит выпускной квалификационной работой (44%);
- 8) часто неясен механизм поощрения за участие в НИД (например, премия в виде стипендии за первое место участнику конференции) (38%);
- 9) отсутствие осознания ценности НИД как таковой с точки зрения саморазвития; повышения самостоятельности, в том числе принятия решений; получения удовлетворения от самостоятельно

полученных результатов (научных и практических); работы с преподавателем в соавторстве; приобретения опыта работы в коллективе; расширения мировоззрения; получения навыков отстаивания своего мнения; ценности публикации «своих» идей, попадания в базы научного цитирования; существования «мира науки» и причастности к нему; ценности времяпровождения в виде процесса познания и др. (33%);

- 10) неразвитость творческих способностей, чему способствует возможность сдачи письменных работ, например, рефератов, контрольных работ, частично заимствованных из сети Интернет, в том числе и в виде компиляции без попытки творческой обработки информации (30%);
- 11) негативный опыт работы в коллективе (возможно, школьном), высказывания своих идей (29%);
- 12) не всегда имеющаяся возможность использования студентом результатов НИД в выпускной квалификационной работе, учитывая требования к ее содержанию (20%);
- 13) неправильное представление о НИД, как о рутинном процессе, а не о как интересном, творческом процессе (20%);
- 14) низкий уровень развития научно-технической базы (18%).

Из данного опроса следует, что основными причинами недостаточно высокой мотивации к НИД являются неуверенность в своих способностях, недостаток времени на НИД. Значимыми также являются неполная ясность организации НИД и желание получать практическое вознаграждение, а не только моральное удовлетворение. Кстати, недостаточное осознание ценности НИД, как разновидности творческой, интеллектуальной деятельности, как показало интервьюирование, также выступает одной из причин недостаточной мотивации к НИД. Развитие материально-технической базы не является значимой причиной недостаточной мотивации.

На втором этапе исследования мнений студентов, им было предложено выбрать, какой из мотивов мог бы стать определяющим в случае, если они примут решение заниматься НИД. Мотивы были укрупненно разделены на три группы. Причем так же, как и на предыдущем этапе, студент мог выбрать не один мотив. Полученные результаты выглядят следующим образом:

- 1) мотивы, имеющие рациональную основу (например, дополнительные баллы при аттестации), выбрали 89% опрошенных;
- 2) мотивы, способствующие реализации способностей непосредственно к науке, выбрали 49%;

- 3) мотивы, позволяющие достичь иных целей (например, достижение популярности в студенческой среде), посчитали значимыми 40% опрошенных.

Как видим, проведенное исследование в некоторой степени подтверждает доминирование прагматического мотива начать заниматься НИД в студенческой среде. Хотя и желание развивать способности к научной деятельности также относительно значимо.

### **Выводы** *Conclusions*

Выявление причин низкой мотивации студентов к НИД позволяет с учетом разных мотивов, побуждающих, в том числе и потенциально, студентов заниматься НИД, разработать рекомендации по повышению мотивации к этой деятельности, исходя из следующих ситуаций:

1. В основе мотивации лежит рациональное начало, то есть студент занимается НИД по причинам «облегчения» получения желаемой оценки по конкретной дисциплине; приобретения известности, как «старательный, активный, способный» студент среди преподавателей, с которыми придется вступать в контакт в процессе обучения; использовать все возможности, которые дает обучение в вузе, оплаченное из бюджета или самостоятельно.

*Возможная проблема:* студент, решая текущие задачи, рационально подходя к НИД тем самым «теряет» возможность раскрыть свои способности в полной мере.

*Действие со стороны руководителей НИД студентов:* поощрять, пытаться раскрыть и иные стороны НИД, например, развитие способностей, получение удовлетворения от процесса и результата.

2. В основе мотивации находится потребность в НИД ввиду наличия способности к этой деятельности, то есть студент занимается НИД, так как ощущает потребность реализации своих не только способностей, но и потребностей; представляет научную среду, как одну из важнейших составляющих социальной среды человека; стремится к научным результатам; желает быть услышанным, понятым, принятым в кругу людей, занимающимися наукой; получать удовлетворение от самого процесса научной деятельности и, возможно, достичь желаемый научный результат.

*Возможная проблема:* студент может быть недостаточно нацелен на результат, так как сам процесс НИД и все, что с ним связано уже доставляет ему удовлетворение.

*Действие со стороны руководителей НИД студентов:* развивать способности, одновременно нацеливая не только на процесс, но и в большей мере на результат.

3. Основу мотивации формирует желание раскрыть иные способности или удовлетворить иные потребности: удовлетворение доставляет сам процесс высказывания своего мнения; имеется неудовлетворенная потребность быть в центре внимания; есть желание узнавать новое в любой сфере; удовлетворение доставляет работа в коллективе, осознание процесса саморазвития, при этом сама научная сфера не является важным фактором.

*Возможная проблема:* студент нуждается в активном развитии своих способностей, сотрудничестве с другими людьми, но не особенно осознает ценность именно научной деятельности.

*Действие со стороны руководителей НИД студентов:* помочь разобраться какая именно деятельность привлекает студента - непосредственно НИД или только положительный внешний эффект от нее. В этом случае стоит попытаться раскрыть для студента все значимые стороны НИД и, в случае успеха, помочь раскрыть в полной мере свои способности.

Как показал опрос, студент может начать заниматься НИД в результате сочетания двух или даже трех из вышеперечисленных мотивов, но формирование в его сознании ценности научных исследований, как процесса, свойственного человеку с развитыми способностями, будет более прочной основой для формирования общности молодых, способных, уверенных в себе ученых.

### **Summary**

The article substantiates the importance of student participation in research, as such activities will contribute to the growth of young people 's scientific potential; better learning of educational material, more complete disclosure of abilities.

The motivation of students for research activities was dealt with by a large number of scientists, but many issues require further study. The results of many studies show that the motives that drive students who are engaged or would like to engage in research activities are pragmatic. In other words, students, engaged in science, seek to solve their current problems: obtaining higher grades in examinations, forming good relations with teachers, etc. The number of the same students who are engaged in science due to achievement of high scientific goals, self-realization, obtaining satisfaction from the scientific process is small. The same conclusions were reached by the authors of this article, conducting interviews with students, as well as further analysis and synthesis of the results. Authors of scientific publications, whose points of view are considered in this article, propose various ways to increase motivation of students to scientific activity: from purposeful formation of motives to scientific activity to improving of material and technical base.

The authors of this article, in addition to what is offered in the scientific literature, consider it necessary to take into account individual motives of students in the development and implementation of a motivation system, which allows to intensify research activities of students in the university.

The strongest motivation for research activities is found in students wishing to engage in this specific activity or meet other needs, because of their clear ability to do so. In other cases, with the successful work of student research managers, a good result can be achieved, provided that students' knowledge of the essence, content of such activity, satisfaction that can be obtained from both the process and the result is enhanced.

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# FORMATION OF THE PROFESSIONAL COMPETENCE OF FUTURE PRIMARY TEACHERS WITH THE USE OF MODERN TEACHING METHODS

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**Abstract.** *The article considers the problem of formation of professional competence of future primary teachers. The regulatory framework governing the professional activities of teachers in Ukraine (“Concept of development of Pedagogical Education”, “Professional Standard “Primary School Teacher of Secondary Education””) is analyzed. The urgency of the problem of future schoolteachers' professional training for the modern school, which is being studied within the framework of the project “New Ukrainian School – New Teacher” is proved.*

*The definitions of “competence”, “professional competence”, “professionalism” of both national and international scientists are analyzed.*

*It is proved that professional competence is an integrative characteristic of business and personal qualities of a specialist, reflects the level of knowledge, skills and experience required to achieve the goal of a certain type of professional activity, as well as the moral position of a specialist.*

*The article presents modern methods of training future primary school teachers: “design-thinking” as a creative way of thinking, aimed at creating non-standard solutions and innovations for the formation of professional competence of future teachers of primary education (stages of “design- thinking”: empathy, focusing, ideas generation, prototyping, testing); interactive teaching methods (“lotus blossoming”, mixed media, jury, presentations, etc.), focus group research.*

*The article proves the idea that the formation of key competences of students in the New Ukrainian School, competitiveness and ability to enter the world global space depend on the professional competence of the teacher.*

**Keywords:** *future teachers of primary education, modern methods of education, professional competences, professional training, the New Ukrainian School.*

## Introduction

The current state of the development of the society in Ukraine, which is characterized by accelerated progress of technologies, requires cardinal changes in education. In modern conditions, teacher training should meet public requirements formulated in professional and educational standards, take into

account global trends and recommendations of influential international organizations for teacher training.

The urgency of this topic can be traced in the approved “Concept for the development of pedagogical education”, the aim of which is to improve the system of pedagogical education to create a training base for teachers of the new generation, providing conditions for the creation and development of modern alternative models of uninterrupted professional and personal development of teachers (On approval of the concept, 2018). Therefore, special attention should be paid to the problem of the professional training of future primary school teachers in the New Ukrainian School, which was launched in 2018. This problem in Ukraine is being investigated in the framework of the project “New Ukrainian School – New Teacher”.

The purpose of the article is the research of the professional competence formation process in future primary school teachers using modern teaching methods.

The main methods of studying the problem were: testing, method of analysis of pedagogical situations (cases), focus group survey. The method of testing made it possible to test the theoretical knowledge of professional disciplines among future primary school teachers. The analysis of pedagogical situations implied that students would solve pedagogical tasks in which the problem situation was simulated. Their solution enabled the identification of a package of knowledge, skills and competencies needed for future primary school teachers. The focus group survey method helped to identify the range of opinions of future primary school teachers on their level of professional competence and to justify ways of improvement.

The experiment involved third-year students (36 people) of the Pedagogical Faculty, specialty “Primary education”.

### **Theoretical overview of the problem**

It should be noted that recently the problem of teachers' competence has been in the focus of researchers' attention. Competent approach in education has been studied by both national and foreign scientists, in particular, N. Bibik, M. Kubitskaya, I. Onyshchenko, I. Osadchenko, S. Skvortsova, L. Khoruzha and others.

Thus, the ethical competence of a future primary school teacher is quite deeply revealed in the monograph by L. Khoruzha (2003). The problem of forming a teacher's professional competence and its types was studied by S. Skvortsova (2009). M. Kubitskaia opened the questions of the competent approach to a teacher's professional training. She substantiated the concept of “professional competence”, defined the competences that the future teacher

should possess (Kubitskaia, 2016).

But, despite a significant number of scientific publications, in which the problem of professional teacher training was researched, today it requires a new vision, new approaches due to the requirements of the New Ukrainian School.

The research of the problem convinced that the main characteristics of the future modern teacher should be professionalism, competence, public interest in the competence approach, self-organization, creativity. Therefore, the new paradigm of higher education should provide for creation of a new educational space that will provide quality training of future specialists for professional and research activities in the New Ukrainian School.

In our study, the concept of “competence” is defined as “the possession of appropriate knowledge and abilities that enable a person to make a thorough judgment about a certain area and act effectively in it” (Bibik, 2004).

By “professional competence” we understand the integrative characteristic of business and personal qualities of a specialist, reflects the level of knowledge, skills, experience sufficient to achieve the goal in a certain type of professional activity, as well as the moral position of a specialist (Encyclopedia of Education, 2004).

Today, the professional competence of future primary school teachers must correspond to the work functions specified in the professional standard “Primary school teacher of the institution of comprehensive secondary education”, approved by the Ministry of Social Policy of Ukraine. These are such labour functions:

- planning and implementation of the educational process;
- ensuring and supporting the learning, upbringing and development of students in an educational environment and family;
- creating an educational environment;
- reflexion and professional self-development;
- conducting educational research;
- providing methodological assistance to colleagues in the education, development and socialization of primary school pupils in the secondary comprehensive school system;
- generalization of own pedagogical experience and its presentation to the pedagogical community;
- assessment of the performance of primary school teachers in the institution of general secondary education (On approval of the professional standard, 2018).

In our opinion, the training of future primary school teachers in pedagogical higher education institutions needs to be updated and improved in order to successfully perform these jobs.

Studying this problem about the formation of the future primary school teachers' professional competence, we used such modern teaching methods in the process of teaching special subjects as:

1. **The method of “design-thinking”** is a creative way of thinking, aimed at creating non-standard solutions and innovations (Zubkova, 2019). The main task of this method was to generate new solutions and find creative ways to solve pedagogical problems. It is aimed at forming teamwork skills, developing emotional intelligence, as well as critical and creative thinking of the student. The method consists of certain stages, the application of which in the right sequence leads to the desired result: empathy, focusing, generation of ideas, prototyping, testing (Zubkova, 2019). Thus, using this method of “design-thinking” in the study of the academic subject “didactics” with the 3rd-year students of the Faculty of Pedagogy (36 students), we defined the requirements to the teacher of the New Ukrainian School. In particular, the students were asked the question “What should a teacher of the New Ukrainian School be like? Answering this question, the students gradually went through the stages of “design-thinking”. The methodology was implemented through the following rules: dividing students into groups; selecting a speaker in a group; interview questions (10 different questions: open, hypothetical, clarifying, which were related to the speaker of another group); discussion of the survey results; highlighting dominant ideas and preparation of presentations.

As the results of the research have shown, all groups in their presentations noted the dominant professional qualities of the modern teacher: creativeness, imagination, knowledge of professional methods, which are the components of the professional competence of a New Ukrainian School teacher.

2. **The method of creative thinking “lotus blossom”** – an active method of education, which affects the development of thinking, creativity, initiative of students. It enables future specialists to orientate themselves in the pedagogical profession and understand educational competitiveness in the labor market. The method of “lotus blossom” suggests the observance of certain rules and sequence of actions: record on the center of the main theme; record on a circle the concept on the main theme (there should be several circles). The process continues until the “lotus blossom” chart is finished. In the “lotus blossom” method, some ideas transfer to the others and it seems that they appear independently. For example, the “lotus blossom” method was used in the course of studying the topic “The developing nature of learning in modern school” in the subject “didactics”. In this way, students revealed the didactic value of one of the approaches of the developing learning method: “Help the child to do it himself”.

3. **The mindmaps method** is a method that allows to structure and visualize students' knowledge in order to generalize a lot of information and highlight basic concepts (Korotiaieva & Kandyba, 2019). The scheme of the method: a theme is

written on the board; a group offers and organizes ideas and information, presenting them visually, often in clusters. For example, one of the topics for study was “A textbook for the New Ukrainian School”. The following issues were discussed by the students: Why should the developing focus of the textbook be strengthened in a person-oriented education environment? What do we mean by “A Textbook for the New Generation”? Why is it particularly important to develop the skills needed for the primary school students to work with the textbook in the conditions of the information society?

4. **Mixed media method** (using PowerPoint, multimedia whiteboards, video) plays an important role in the professional training process of students (Shevchenko, 2012). The method of the organization of information involves the use of information elements in a mixed sequence. Students work in pairs or in small groups to organize them. It is appropriate to use multimedia presentation method to study theoretical material on a certain topic, to accompany the lecture, to consolidate the studied material, to organize it. As researcher I. Shevchenko notes, “a multimedia presentation is a set of texts, images, sound, animation and other means of presenting information on a certain topic, which is saved in a file of a special format ...” (Shevchenko, 2012).

5. In the discussion of issues related to the organization of the educational process in primary school it is advisable to use **the jury method** during the practical classes. It requires the engagement of several “experts” (usually primary school teachers, where students are trained as pedagogical interns), who answer questions from the audience on their practical teaching activities. The experts may also be students who have recently completed a pedagogical practice in the school and want to share their impressions, suggestions, etc.

### Research result

In the process of forming the professional competence of future primary school teachers in our research, we checked the following main components: motivational, informative, operational-active, personal, reflexive (Onyshchenko, 2012). Their characteristics are presented in Table 1.

Table 1 *Characteristics of professional competence components (Onyshchenko, 2012)*

Professional competence components	Characteristics of professional competence components
Motivational	Ensuring positive motivation of a student to express and develop professional and pedagogical competence which is expressed in interest to pedagogical activity, desire to work as a primary school teacher, need for self-education, self-development.

Meaningful	Students possess scientific professional and pedagogical knowledge: pedagogical, methodical, special, general educational, managerial, information technological; ability to think pedagogically based on the system of knowledge and experience of cognitive activities.
Operating-active	The student's ability to solve practically teaching tasks, experience, abilities, mastery of pedagogical technologies and pedagogical management, professional thinking.
Personal	Personal and professionally important qualities of personality: love for children, kindness, altruism, empathy, tolerance, moral purity, sociability, competitiveness, activity, independence, initiative, creativity, flexibility of thinking.
Reflexive	The student's ability to effectively and adequately carry out reflexive processes, to realize reflexive abilities, to provide processes of self-cognition, self-development and self-improvement.

After introducing the above mentioned modern methods of education into the educational process, we checked the level of formation of certain components of professional competence.

Thus, the testing method made it possible to check theoretical knowledge of professional disciplines (meaningful component). The base of test tasks was recorded in the computer, to which only the student had access. The evaluation of the test tasks was carried out independently. The results showed that 20 students (55,5%) out of 36 (100%) passed the tests with excellent marks, 12 students (33,3%) received good marks, 4 (11,1%) received satisfactory marks.

The solution of situational pedagogical cases (Osadchenko, 2012) made it possible to determine the level of the operating-active and reflexive components of future primary school teachers. Such pedagogical situations were suggested for solution (Matvienko, 2005):

1. *The child is careless in learning mathematics, constantly disturbs others, does not listen to the teacher at all, does his own business, but draws very well and loves doing it (What are the pedagogical principles to be guided in this situation? Justify your choice).*

2. *There is a pupil in the primary school class, he is careless in his daily duties, passive in class life, and he is late for class. (Describe the main ways to implement the principle of individual approach to such students.)*

3. *Watching the students of the 1st grade, the teacher noticed that one of her students in communication with children is irritable, easily quarrels with friends, often arranges fights. In all her failures, the girl blames anyone but herself. After a fight or quarrel with girls and boys, she comes to the teacher with tears in her eyes and complains about other children. (Determine the aggressiveness of the*

girl. Suggest the right teacher's tactics for communicating with her).

The results of the analysis of the proposed pedagogical situations suggest that 32 (88,8%) students actively participated in the discussion and solving pedagogical problems, expressed their thoughts freely and convincingly and offered various ways of solving situations. Only 4 (11,1%) students were less active.

Consideration and solution of situational problems, in which the problem situation was simulated, made it possible to trace the students' usage of the complex of knowledge, skills and abilities provided by the meaningful, operating-active and personal components and necessary for future primary school teachers.

The focus group research method (Lapshyn, 2016) made it possible to discuss with students the problem of introducing new teaching methods and their positive impact on the process of forming professional competence of future teachers.

An example of the questions that were suggested for the focus group survey:

1. *Is it worthwhile to significantly change the established approaches to learning disciplines today?*

2. *Why are innovative methods a necessary condition for successful professional competence development today?*

3. *Why is the innovative awareness of a student a tool for leadership?*

The focus group discussion was dominated by statements of the students about changes in the educational process, introduction of modern teaching methods, innovative methods that stimulate and encourage students to study. The results of the discussion showed the activity of students in expressing their own thoughts, interest in pedagogical profession, creativity, flexibility of thinking. The focus of the discussion was on updating the study of special subjects using modern teaching methods.

In our opinion, it is these components that fully reveal the structure of professional competence of a future primary school teacher and contribute to the clear identification of ways of its development.

## **Conclusions**

The results of the research obtained in the course of the experiment allow to state that the modern teaching methods effectively influence the formation process of professional competence of future primary school teachers. The students who were involved in the experiment showed positive results. Depending on the manifestation of components in future primary school teachers, it can be claimed that the professional competence required for teaching activities in the New Ukrainian School has been formed.

After all, it is the professional competence of a teacher that determines the formation of key competencies of students, including (Typical educational programmers, 2018): fluent command of the state language; ability to communicate in the native language; mathematical competence; competence in science, technique and technology; innovation; environmental competence; information and communication competence; life-long learning; civil and social competence; cultural competence; entrepreneurship and financial literacy.

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## **INTEGRATION OF GENERAL TECHNICAL KNOWLEDGE IN PROFESSIONAL TEACHING OF TECHNOLOGY TEACHERS**

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***Abstract.** The content filling of the educational field of «Technology» provides a deeper acquaintance of students with the modern achievements of technology, mastering the practice of design and technological activities. Bearing this in mind, it is topical to develop the scientific principles of engineering training for future teachers of labor training and technology, which led to theoretical substantiation and practical implementation of structural changes in curricula in general technical disciplines. The analysis of the scientific literature and practical experience shows that the proposed structure of the content of the integrated course «Engineering Mechanics» is aimed primarily at intensifying the students' cognitive activity, as well as their broad involvement in independent work on the design and construction of technical objects. Such circumstances favor direct impact on the content of engineering training of future teachers of labor training and technology linked to the global change in scientific approaches and innovative processes in the creation of technical facilities and also indirect – caused by the development of modern production and information technologies.*

*The article analyzes the current system of engineering training of future teachers of labor training and technology which is characterized by the reorientation of the educational process to the project-technological activity of students. The authors substantiate the necessity of integration of knowledge from the cycle of general technical disciplines in the content of engineering training of future teachers. Based on the didactic principle of continuity and taking into account the requirements of school curricula and cross-curricular relations with different disciplines of vocational training of teachers of labor training and technology, the authors propose the structure and content of the integrated course*

*«Engineering Mechanics», which consists of the following sections: 1) «Statics, kinematics and dynamics»; 2) «Material resistance and machine parts calculation».*

**Keywords:** *engineering training, general technical disciplines, engineering mechanics, design and technological activity, pedagogical institution of higher education, teacher of labor training and technology.*

## **Introduction**

In the system of engineering training of teachers of labor training and technology the knowledge of mechanics plays an important role not only for acquiring knowledge of the fundamentals of statics, dynamics, types of deformations and calculation of machine parts but also for creating the basis for the study of other professional disciplines. It is the scientific basis of engineering training of teachers that constitutes a fundamental and systemic link in the formation of their professional knowledge and skills, which leads to the introduction of appropriate changes and adjustments in the content of educational disciplines of engineering-technical and practical-technological cycles.

At present, the development of content training for future technology teachers is based upon the ontological-didactic transformation of scientific knowledge into educational material, in the process of which the innovative knowledge is accumulated, modern achievements of some applied sciences, innovations in the field of science and technology while the changes in the content of labor training and priorities in the development of modern types of production are also taken into account. The integration of the content of separate subjects on the basis of applied use of educational material in practical activities ought to serve as the basis for the formation of the system of knowledge and skills in the process of engineering training of future technology teachers.

An analysis of the system of vocational training of this category of teachers in pedagogical universities shows that their level of engineering training is insufficient for the qualitative fulfillment of functional duties in the current environment, which are marked by reorientation of the educational process in the school towards design-technological activities. Thus, engineering training of future technology teachers at the educational and qualification levels of «Bachelor» and «Master» will improve significantly if the content of individual academic disciplines of the technical cycle integrates into the holistic content of engineering training of students and qualitative new educational and methodological complexes of similar courses where the principle of continuity and unity of the substantive and procedural sides of educational and cognitive activity of future teachers are created.

An important constituent of the vocational training of a teacher of labor training and technology is the engineering-technical component. Many researchers have focused their attention on this problem: O. Avramenko, A. Bilan, S. Honcharenko, V. Husev, Y. Hushulei, R. Hurevych, M. Korets, V. Kurok, O. Lavrentieva, V. Madzigon, V. Sydorenko, V. Steshenko, G. Tereshchuk, D. Tkhorzhevskiy, P. Yakovyshyn, S. Yashchuk and others. In particular, S. Yashchuk revealed theoretical foundations for studying general technical disciplines in the process of master's training of future technology teachers (Yashchuk, 2015); O. Lavrentieva carried out a broad review of the content and thoroughly analyzed the key trends in the development of general technical training of students of technological and pedagogical specialties (Lavrentieva, 2017); A. Bilan considered theoretical and practical approaches to integrating the subjects of computer science and the cycle of general technical training, revealing their common content and methodological aspects (Bilan, 2018). However, despite their interest in the problem of creating an integrative course in engineering mechanics, many of its aspects did not find adequate coverage.

On the other hand, the analysis of the actual state of engineering training of future technology teachers has made it possible to outline a number of contradictions between the need of society to form a person capable of active and creative activity in the field of material production and educational services, and insufficient number of professionally-trained technology teachers as well as between the requirements of scientific and technological development of production and outdated system of engineering training of pedagogical workers in this category.

### **The relevance of the problem of studying engineering mechanics by future teachers**

Looking back at the history of vocational education, it should be noted that initially the knowledge of the field of mechanics was acquired by future teachers within the discipline «Engineering Mechanics», which was introduced into the educational process as a symbiosis of several disciplines in a somewhat shortened version, compared to the number of classroom hours at engineering-technical higher education institutions. We should not forget that the systematic training of teachers of labor education (technology) began in the late 1950s, which was conditioned by the adoption of the reform law of that time «On Strengthening the School's Relationship with Life and on the Further Development of the National Education System in Ukrainian SSR» (1959) (Zakon pro zmitsnennia vzaiemozviazku shkoly z zhyttiam ta pro podalshyi rozvytok systemy narodnoi osvity v URSR, 1959). Since early 60s, there were

attempts at teacher training (pedagogical) institutes to mechanically unify different specialties like «Teacher of physics and technical mechanics», «Teacher of labor training, physics and electrical engineering», «Teacher of physics and basics of production». The training of engineering and teaching staff for the vocational education system was also launched. Labor education, as a separate specialty, was transformed with a certain change of qualifications and finally received the title «Teacher of vocational training and general technical disciplines», which corresponded to the name of the school subject.

In recent decades, there have been numerous scientific studies aimed at optimizing integrated knowledge of engineering disciplines, in particular technical mechanics, in the content of general technical training of future technology teachers (Honcharenko & Yakovyshyn, 1997; Korets & Nemchenko, 2015; Kurok, 2012; Tkhorzhevskiy, Andriiashyn, & Antoniv, 1992). However, throughout the changes in the names of the specialties, the structure of engineering mechanics remained unchanged with the subject being not the only autonomous discipline before. For example, in the late 1990s, following the path of integrating the content of engineering disciplines for pedagogical specialties, such autonomous courses as «Theoretical Mechanics», «Resistance of Materials», «Theory of Mechanisms and Machines», «Machine Parts» were artificially combined into the integrated «Mechanical Engineering» course. In this period, with some approximation, the same scheme was studied in engineering mechanics in secondary specialized educational institutions – technical schools and colleges. Today, scientific research is underway to improve the methodology of teaching individual sections of engineering mechanics in accordance with this course structure. Therefore, it has become necessary to organically approximate the structure and content of engineering disciplines to the content lines, which are laid down in the State standard of basic and complete general secondary education within the educational field «Technology» (Derzhavnyi standart bazovoi ta povnoi zahalnoi serednoi osvity, 2011).

The curricula of the disciplines that can be attributed to engineering mechanics were undergoing constant changes in the number of hours and were consistently introduced into the educational process of higher education pedagogical institutions in 1970, 1981, 1987, 1998 and 2001. Moreover, in the first two curricula the course «Engineering Mechanics» did not belong to the cycle of professional preparation but to natural sciences. The first attempt to develop an integrated course in engineering mechanics was made by V. Kurok, in which she distinguished the following main sections: «Statics», «Kinematics», «Dynamics» and «Fundamentals of Machine Parts Calculation» (Kurok, 2012). For the greater part, the researcher made a bias on theoretical mechanics; therefore the classic names of its separate sections were preserved.

However, the practical experience of teaching this discipline necessitated its improvement by making adjustments and additions without changing the integrative approach to the content development. The role of integrated knowledge of science and technology for future educators was reflected in numerous scientific works. They stated that due to the «integration of scientific and technical knowledge fundamentalization of pedagogical education takes place, which is realized through the combination of general educational and general technical cycles of professional training of future teachers» (Kurok, 2012, p.69). Therefore, the scientific substantiation of the new approach to the integration of the content of the course «Engineering Mechanics» for students studying under the educational-professional program «Labor Training, Technology and Computer Science» is beyond any doubt.

In the transition from the classical model to the four-stage training of technology teachers, the amount of hours spent on studying engineering mechanics decreased significantly and that tendency led to a decrease in the attention to engineering training of teachers. With the introduction of the two-staged teacher training after the national higher pedagogical education entered the Bologna process, engineering mechanics has been taught at second and third years of university because its knowledge is mandatory for graduates of educational and qualification level «Bachelor». In the previous curriculum, a dramatic reduction in the amount of hours for studying engineering mechanics led to the compaction of the content of this course on a rational principle, namely: not by eliminating separate issues and topics but in the form of concentration of educational information and based on expediency, which is determined by typical programs of school subjects «Labor Training» for students of grades 5 – 9 (Prohrama dlia zahalnoosvitnikh navchalnykh zakladiv: Trudove navchannia. 5-9 klasy, 2017) and «Technology» for students of grades 10 – 11 (Zahalnoosvitnia prohrama: Tekhnolohii 10 – 11 klasy (riven standartu)).

The analysis of the established fundamental definitions of engineering and mechanics shows the emergence of a single harmonious categorical field and definitions of modern innovative technologies. Without new technologies, it is impossible to create new technical appliances and their corresponding mechanics, and therefore the name of the integrated course «Engineering Mechanics», in our opinion, completely corresponds to its content. Engineering mechanics as a discipline has traditionally functioned in the system of general technical training of engineers and technicians and it existed in the period from 1991 to 1998 for the teachers of labor training, which was carried out in pedagogical schools, colleges, institutes and universities.

### Structure optimization and content integration course «Engineering Mechanics»

Today, machines and mechanical devices perform the major part of production processes. Their rational use is possible in case of steady awareness and understanding of the processes that take place in them. Therefore, it can be assumed that understanding of the structure and nature of a machine or mechanism is a social need of a modern technology society. It is the technology teacher who is called upon to form this knowledge in the students, which requires first and foremost a very high level of general technical competence from him.

The work of machines and mechanisms is studied by a large number of scientific, natural and general technical disciplines, so it is virtually impossible to cover the whole spectrum of knowledge about the machine. In the first stages of integration, the course «Engineering Mechanics» used materials of the previous program in mechanical engineering and this was carried out according to the model, as shown in Fig. 1.

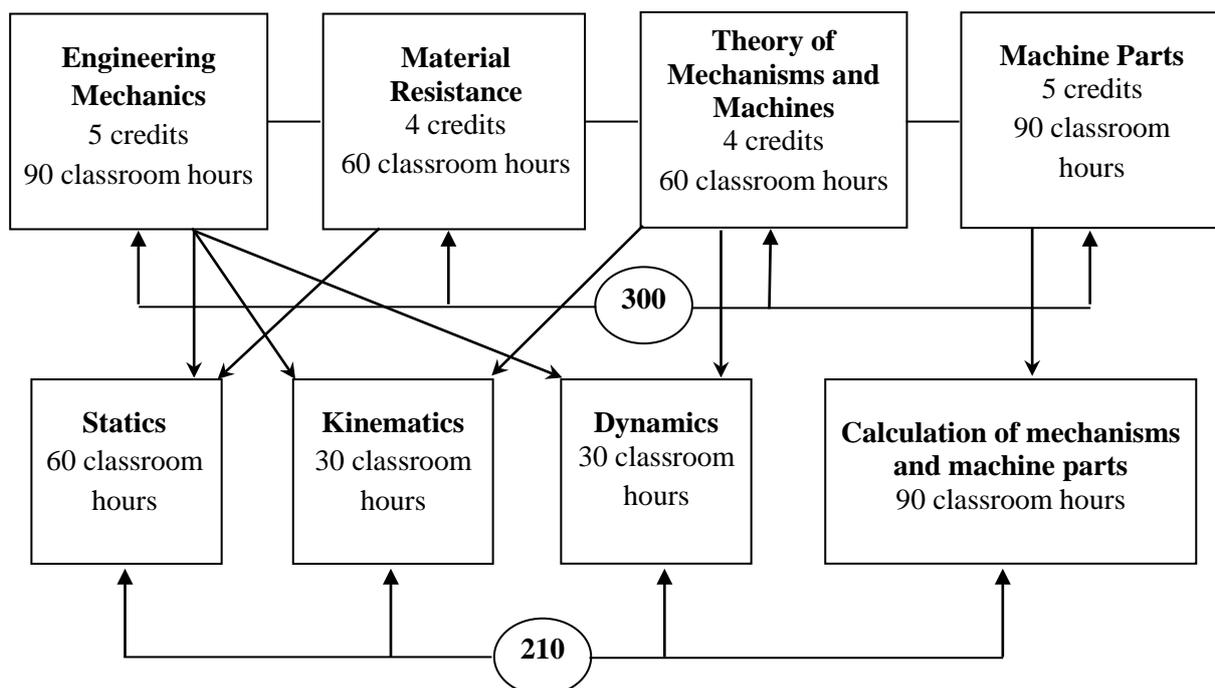


Figure 1 Structural integration scheme of the discipline «Engineering Mechanics»

This scheme eliminates the duplication of content in general engineering disciplines, so the integrated course «Engineering Mechanics» contains a set of general technical knowledge that is needed for the future teacher of labor training and technology to organize the educational process in the school.

The intermediate stage in the improvement of the program in engineering mechanics involved structural changes with the introduction of such sections as: statics of absolutely solid body; statics of complex systems; kinematics and dynamics; basics of machine parts calculation, etc. If we analyze the dynamics of the amount of hours envisaged for the study of engineering mechanics, then we see a tendency for their significant decrease (by 30%), which may indicate that the content of this discipline dropped out of attention or worse – it did not find its place in the system of professional training of teachers for the educational field «Technology». Reducing the amount of hours led to a superficial study of widely used mechanical transmissions and auxiliary elements and some of the knowledge was taken outside the curriculum and became a part of students' independent work. Therefore, a systematic analysis was carried out, which resulted in the obligatory list of topics to be studied and for research-calculation works, which allowed to deepen the knowledge, to form and consolidate the skills of development of technical objects.

The analysis of the school programs «Labor training» for students of grades 5 – 9 (Prohrama dlia zahalnoosvitnikh navchalnykh zakladiv: Trudove navchannia. 5 - 9 klasy, 2017) and «Technology» for students of grades 10 – 11 (Zahalnoosvitnia prohrama: Tekhnolohii 10 – 11 klasy (riven standartu)) testifies in favor of the fact that the topics in this section are studied in depth in school teaching and production work-shops. Among them are the following issues: 1) general description of the parts of the mechanisms and machines used in technology; concept of parts and mechanisms; types of mechanisms; crank mechanism; 2) kinematic circuits, symbols on the circuits; 3) types of connections of machine parts; threaded connections; elements of thread; connecting parts with rivets; types of riveted connections the forces acting on the rivets and the condition of their strength; 4) mechanical gears (belt, screw and rail).

Engineering training requires the development of methods and didactic tools, the development of the creative potential of future technology teachers in the process of studying general technical disciplines. Modern pedagogical science has created a variety of teaching methods; however, in our view, we consider systematic the classification of teaching methods from the standpoint of the information approach to the educational process with the method of self-education and self-knowledge with the advisory assistance of the teacher being the most effective. Unfortunately, the educational process of mastering the content of technical disciplines does not always stimulate students' creative cognitive work. In addition, the course project, as one of the few forms of independent work of a practical nature, requires a creative approach to the application of the whole range of general technical knowledge. Performing design work encourages the student to systematize previously obtained

scientific, natural, general and technical knowledge, which intensify educational-cognitive and creative activities aimed at developing a new technical object. On the other hand, creative approach to one's job is the main characteristic of a competent specialist. After all, living in a time of rapid development of new information technologies, it is inappropriate to use exclusively teaching methods. Therefore, the use of specialized computer programs should be the main method of accelerated study of the integrated course «Engineering Mechanics».

To this day, the main components of the integration of engineering mechanics were: statics of absolutely rigid body; statics of complex systems (resistance of materials); kinematics and dynamics; basics of machine parts calculations. They were studied from the 3<sup>rd</sup> till the 7<sup>th</sup> semester with applied mechanics completing the course in the 8<sup>th</sup> semester. After analyzing the state of teaching of general technical disciplines and taking into account many years of experience in this integrated program, we came to the following conclusions:

- 1) rename the section «Statics of absolutely rigid body» into natural «Statics» without changing its content and study in the amount of 2 ECTS credits;
- 2) continue to study the section «Kinematics and Dynamics» (2 ECTS credits);
- 3) combine the section «Statics of Complex Systems» («Material Resistance») with the section «Fundamentals of calculating machine parts» while maintaining the total amount of hours (4 ECTS credits) and call it «Resistance of materials with machine parts calculations»;
- 4) at the end of the course, incorporate some issues of applied mechanics as part of preparation for the course project (2 ECTS credits).

According to the curriculum for the preparation of teachers of vocational training and technology at the educational-professional (bachelor) level, 10 ECTS credits (300 hours) are allocated for engineering mechanics, which include 120 hours of classwork (30 hours of lectures and 90 hours of laboratory work). The course of engineering mechanics begins in the 3<sup>rd</sup> semester (2 hours a week) and ends in the 7<sup>th</sup> semester (1 hour a week). It is advisable to study separate sections according to the following scheme:

- 1) 3<sup>rd</sup> semester – 2 hours per week, of which: 2 hours – statics of solid objects (one hour of lectures and one hour of laboratory work); type of control – credit;
- 2) 4<sup>th</sup> semester – 3.5 hours, of which: 2 hours – kinematics and dynamics (2 hours of lectures and 1.5 hours of laboratory work); type of control – examination;
- 3) 5<sup>th</sup> semester – 1 hour, of which: 1 hour of lectures on material resistance and machine parts calculation; type of control – none;

- 4) 6<sup>th</sup> semester – 3 hours to continue studying the resistance of materials and machine parts calculations, of which: 1 hour of lectures and 2 hours – laboratory work; type of control – examination;
- 5) 7<sup>th</sup> semester – 2 hours to study selected issues of applied mechanics, of which: 1 hour – lectures and 1 hour – laboratory work; type of control – credit; design of technical objects (machines and mechanisms) – course project.

As we can see, due to the integration of the content, the total number of classroom hours for the study of the subject «Engineering Mechanics» has decreased from 160 to 120 hours.

Taking into account the requirements of school curricula and cross-curricular links with other disciplines of vocational training of teachers of labor education and technology, we propose to fill the content of the integrated course «Engineering Mechanics» as follows:

1. The section «Statics, Kinematics and Dynamics» should covers the question of the statics of the material point and the solid as a whole. In this context, one should consider the basic concepts and tasks of statics, bracings and their reactions, composition of forces, the system of convergent forces, the moment of forces relative to the center and the axis, the pair of forces, the conditions of equilibrium, bringing the system of forces to the center, the plane system of forces. It is quite important that one should consider statically defined and unidentified tasks and a spatial system of forces. Friction and its laws is also one of the essential issues of mechanics. Methods for determining the center of gravity coordinates, general questions for solving static problems are included as applied problems.

After that the students get acquainted with the basic concepts of kinematics, types of motions and methods of their task (translational and rotational motions of a point and a solid, complex body motion), plane-parallel motion, kinematic pairs and chains, structure of flat and spatial mechanisms, kinematic study of lever mechanisms, kinematic study of cam gears, dynamic study of planar mechanisms, types of friction in mechanisms and its consideration in calculations, D'Alembert's principle for flat linkages, uneven movement of mechanisms and machines, the basics of the theory of regulation of motion of mechanisms and machines – this is a list of key issues that should be studied after the completion of the course and mastering the basics of dynamics.

2. The section «Materials resistance and machine parts calculation» is proposed to be integrated into one since all theoretical issues of material resistance are implemented in the process of practical calculation of machine parts. Such integration of sections will eliminate the duplication of individual issues of material resistance when calculating machine parts. The theoretical

part includes: basic hypotheses and assumptions, types of loads and major deformations; deformation by stretching and compression, deformation energy; concept of hypotheses of strength, theory of strength; statically indeterminate problems, geometric characteristics of flat sections; deformation by shear, torsion, bending and combined stress; dynamic loading; requirements to machines, their parts, types of gears in machines and mechanisms, axles, shafts, bearings; couplings, coupling machine parts, exploring wave, planetary gears and gearboxes.

## **Conclusion**

The content filling of the educational field of «Technology» provides a deeper acquaintance of students with the modern achievements of technology, mastering the practice of design and technological activities. Bearing this in mind, it is topical to develop the scientific principles of engineering training for future teachers of labor training and technology, which led to theoretical substantiation and practical implementation of structural changes in curricula in general technical disciplines. The analysis of the scientific literature and practical experience shows that the proposed structure of the content of the integrated course «Engineering Mechanics» is aimed primarily at intensifying the students' cognitive activity, as well as their broad involvement in independent work on the design and construction of technical objects. Such circumstances favor direct impact on the content of engineering training of future teachers of labor training and technology linked to the global change in scientific approaches and innovative processes in the creation of technical facilities and also indirect – caused by the development of modern production and information technologies.

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## ON THE GROWING SOCIAL ROLE OF UNIVERSITIES UNDER KNOWLEDGE SOCIETY

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**Abstract.** *The paper intends to investigate the social role of higher education institutions (HEIs) under knowledge society. As knowledge becomes the main asset and driver of social-economic transformations in the 21<sup>st</sup> century, HEIs are positioned as centres where knowledge is generated, accumulated, disseminated and applied. With emergence of knowledge society, university mission “to contribute to the public good” is becoming more visible and tangible in HEIs’ operations.*

*Responding to community needs or societal demand, HEIs will liaise and/or compete domestically and internationally with other state and non-state actors: non-governmental organizations (NGOs), authorities, interest groups, local communities. Both competition and cooperation may produce win-win effect, or end up with win-lose or lose-lose result.*

*Case study method will be used to research different cooperation patterns between HEIs and other actors. In more detail, relationship between HEIs and NGOs will be explored to test the hypothesis that NGOs, who have been leaders in societal change over the last three - four decades, are losing primacy to HEIs. We will examine the social role of HEIs and their cooperation with civil society in situation of emergency, when societal demand for knowledge, expertise and response to crisis is high.*

*In detail, we intend to look at Mariupol State University – a HEI with strong community ties and reputation of a civic university – in order to examine its community service and interaction with municipal knowledge hubs during hybrid war unleashed in 2014.*

*Therefore, the aim of this research paper is to investigate whether and how under knowledge society the social role of HEIs changes in emergency situations and outline their possible contribution to problem-solving in cooperation with other partners, first of all NGOs. Key words: higher education institutions, non-state actors, non-governmental organizations, knowledge hub, knowledge economy.*

**Keywords:** *higher education institutions, non-state actors, non-governmental organizations, knowledge hub, knowledge economy.*

### Introduction

The paper looks into the social role of higher education and intends to demonstrate how the functions of a higher education institution (HEI) have changed under the pressure of social responsibility. As knowledge becomes the

main asset and driver of social-economic transformations in the 21<sup>st</sup> century, HEIs are positioned as centres where knowledge is generated, accumulated, disseminated and applied (Towards Knowledge Societies, 2019). With emergence of knowledge society, university mission "to contribute to the public good" is becoming more visible and tangible in HEIs' operations. From "ivory towers" (Universities are not ivory towers, 2018) HEIs become centres of community initiatives, drivers of social-economic development, problem-solving hubs capable to generate solutions to respond to societal challenges. The crisis in Ukraine that started in November 2013 have affected many spheres of life, but has not changed significantly the role of HEIs and higher education sector.

The article examines the case of Mariupol State University, a HEI located in the East of Ukraine in a city that experienced a Multi-Launch Rocket System (MLRS) attack from the territory of so-called "Donetsk People's Republic" in January 2015 (Spot report by the OSCE Special Monitoring Mission to Ukraine, 2015) when over 30 civilian citizens were killed, about 100 wounded, over 53 building ruined, including schools. While university social responsibility theme is not broadly discussed in Ukrainian academic and expert circles, the attack on the city and proximity of the frontline (10 kilometres from the city) compelled local community to mobilize in order to protect citizens and the city from hybrid war attacks unleashed in the East of Ukraine by Russian Federation. This influx of cause-oriented activism was listed in the survey conducted with participation of Mariupol State University scholars (Pakhomenko, Tryma, & J'moul, 2018) conducted by Mariupol State University scholars and researchers confirms the noteworthy role of academia in counterworking Russian propaganda, as well as acceleration of efforts of civil society, university staff and students to counterattack the hybrid warfare that was especially intense in the period of 2014 – 2015.

Examining the case of Mariupol State University, this research paper aims to investigate whether and how under knowledge society the social role of HEIs changes in emergency situations and outline their possible contribution to problem-solving in cooperation with other partners, first of all NGOs.

Mariupol State University (MSU) was chosen as research object among four other HEIs that exist in Mariupol, for a number of reasons:

- MSU is mostly integrated into local community, actively participates in social life of the city and the region, has close and permanent ties with local authorities and civil society;
- it is a HEI with the slant towards humanities, political and social sciences; therefore, its academic staff is experienced in social work and public relations, policy advice and political consulting; expertise of MSU knowledge workers was solicited during and after the crisis caused by MLRS attack;

- MSU staff and students has demonstrated civic activism after MLRS attack and contributed to many local civic initiatives, including the establishment of knowledge hubs.

### **Literature review**

Academic discourse on the social role of HEIs started to unfold in the late 1990-s. Some scholars link it with emergence of the Triple Helix concept and discussion of university-industry-government relationships initiated by the publication of H. Etzkowitz and L. Leydesdorff (Etzkowitz & Leydesdorff, 2020). Other researchers refer to UNESCO 1998 Declaration (World Conference on Higher Education, 1998) that emphasizes the social role of universities and states the obligations of governments, HEIs, scholars and researchers to serve the society. In the first case, the investigation of relationship between universities, government and business resulted in the concept of "entrepreneurial university"; in the second case, distinct statement on the obligations of HEIs to community or wider society raised high on the agenda the concept of university social responsibility (USR).

UNESCO Declaration emphasizes higher education mission "to contribute to the sustainable development of society", including lifelong learning, consolidation of human rights, democracy and peace, active civic participation. Ten years later, 2009 UNESCO Communique has defined higher education as "a public good" and has added to two core functions of HEIs the third one – "service to community" (World Conference on Higher Education, 2009).

While acknowledging the significance of knowledge transfer, research and development activities (R&D activities) of HEIs and commercialization of knowledge generated at and by universities, we intend to focus in this investigation on another aspect of university social responsibility: service to community and contribution to the public good.

Over the last two decades, several factors have instigated the discourse on the social role of higher education and university social responsibility:

- recognition of the growing role of knowledge under knowledge economy;
- rise of social dimension in Bologna process;
- rise of corporate social responsibility in business and its extrapolation to higher education sector;
- lack of trust in public sector institutions and financial crisis of 2008.

Over the last two decades, publications of the European Union, Organisation for Economic Co-operation and Development, United Nations Organization, World Bank, independent scholars are exploring knowledge as the main asset, the

problem-solving tool to overcome social, economic, political, cultural, local and global challenges, as a driver for development. Considering that knowledge is concentrated in universities, the latter took on the role of knowledge centres capable to propose solution for numerous problems of real life: "Higher education systems exist primarily not only for knowledge creation but to address practical issues of life. Universities should be able to address the challenges that communities face by not merely providing solutions but also building the requisite societal capacity to enable communities to handle future challenges" (Higher Education in the World, 2017).

Bologna process has instigated the discourse on the social role of HEIs via introduction of social dimension in London Communiqué of 2007. Since then, the commitment of EHEA members to social dimension always remains relevant. In Bologna declarations and communiqués, this commitment is shaped as equal access to higher education and broader representation of groups from different social backgrounds, including disadvantaged groups and non-traditional learners; provision of student services and flexible learning pathways (London Communiqué, 2007); development of programmes that meet the needs of fast-changing labour market; consideration of cultural and social diversity; pledge to social inclusion, social solidarity, and civic engagement (Yerevan Communiqué, 2015); contribution to lifelong personal development, intercultural understanding, ethical awareness, equitable access to higher education (Paris Communiqué, 2018).

Nowadays, a broad and diverse pool of discoursants takes part in USR discourse: individual scholars, HEIs, university networks (European Network of Socially Responsible Universities, European Framework for Social and Environmental Responsibility), projects. Several projects on university social responsibility have been implemented by European HEIs under Tempus and Erasmus+ programmes.

In recognition of USR importance, QS World University Rankings introduced assessment of "universities' social responsibility by measuring how seriously a university takes its obligations to society by investing in the local community and environmental awareness" (QS World University Rankings, 2019).

The rise and growth of USR has been influenced by corporate social responsibility (CSR) that has a longer history than USR. For some scholars and experts, CSR was a starting point and a pattern for modelling USR (Mehta, 2011). Introduction of ISO 26000 (ISO 26000 – Social responsibility, 2020) – an international standard on social responsibility addressed to international business, large and small private companies and firms, public institutions, including universities – was an important step in promoting and advancing USR in HEIs via organizational values, governance principles, research ethics etc.

Another factors that gave a push towards USR is decrease of trust in public institutions and financial crisis of 2008 that compelled HEIs to become more open to the public and accountable to taxpayers (Trust in government, policy effectiveness and the governance agenda, 2013). Both factors questioned the rationale for funding universities under the times of scrutiny and demanded the proof of utility of HEIs and their impact on economy, community or wider society. Responsibility was interpreted as accountability and HEIs felt obliged to report to society and provide evidence of public benefit of their teaching, research and community engagement. In the domain of teaching and learning, university social responsibility was embodied as "employability"; in the domain of research, it evolved in "Responsible Research and Innovation" approach (Responsible Research and Innovation-Tools, 2020), EU programme "Science with and for Society", internationally recognized concept of "science shop" and other initiatives aimed at participatory research that responds to the needs of local communities and takes into account concerns of larger societies (Living Knowledge Network, 2019).

In academic discourse and real life, university social responsibility intersects with the third mission of HEIs that today is widely recognized as a core mission, alongside with teaching and research: "previously separate functions of teaching, research and engagement are transformed in a space capable of innovation, of co-creation of knowledge, of visibility for alternative ways of living, of the development of a deeper trans-disciplinary comprehension of reality and its dynamics, and of support for an inclusive form of active citizenship at both the local and global level" (Higher Education in the World, 2017).

Among numerous definitions of the third mission, we regard as dominant the following key features: 1) third mission deals with HEI activities outside academic community (Solomon, 2019), beyond the walls of the university; 2) third mission is not about volunteerism or altruistic service only – it is about mutually beneficial cooperation between a HEI and outer world, where the former contributes to community and benefits from this cooperation (Karlsen & Larrea, 2019, 3) third mission is closely linked to the first and second missions, three missions complement each other, as today it is generally recognized that knowledge is generated not in the laboratories only, and skills developed during community engagement project will be useful during teaching and learning (Third Mission of the University of Vienna, 2018).

In the progressing discourse on university social responsibility and third mission of HEIs, concept of "civic university" has found its rebirth. The idea of a civic university is not new: HEIs of this type were established in the 19th century in industrialized regions of United Kingdom with the aim to facilitate industrialization. In the second decade of the 21st century their reconceptualization occurred due to several reasons. While universities have been

competing over the last two – three decades for international students, grants, high national and international rankings, the status of regional civic universities that serve their communities have been downgraded because civic universities lose in competition for internationalization, research grants and high salaries for graduates who find jobs at regional - often stagnant - labour markets with lower salaries than graduates of large metropolitan HEIs. But the demand for knowledge and demand in knowledge workers has brought a civic university closer to its local community to "provide opportunities for the society of which it is part" including individual learners, businesses, public institutions (Goddard & Vallance, 2012, p.6). Knowledge that HEIs generate, accumulate and disseminate is seen "as a key factor in urban or regional development clusters and sectors" (Goddard & Vallance, 2012, p. 4). In the UK, the National Commission was formed to closely research the civic university roles and functions and develop guidelines and recommendations for their revival (Truly Civic: Strengthening the connection between universities and their places, 2019). The Commission came out with the concept of "truly civic" universities, their key characteristics being:

- related, integrated in the place and context (historical, geographic, strategic and other nuances);
- understanding local populations, their needs and challenges;
- understanding themselves (why, what for, how HEIs are engaged with communities);
- having community engagement embedded into all daily HEI activities;
- working according to the action plan and priorities, knowing the boundaries;
- having local ownership (e.g. citizens are proud of "their" university);
- working with other local institutions (Truly Civic: Strengthening the connection between universities and their places, 2019).

## **Methodology**

Initially, with this investigation we intended to demonstrate that under knowledge society and as a response to local community needs or wider societal demands, HEIs are to enhance their third mission, lead in societal change and take on functions specific of the grassroots NGOs. Our hypothesis was that HEIs as knowledge hubs are more capable to respond to serious societal challenges and compete with NGOs for the delivery community services related to knowledge. We believed that we will find evidence that local NGOs were losing primacy to HEIs and develop recommendations on how HEIs and NGOs could work together for the public benefit when faced with grave challenges of hybrid war, under the circumstances when hostilities interpose with propaganda.

We applied the case study method with the purpose to research and describe how MSU as a civic university responds to the above mentioned challenges. Internet search was used to collect the data from the web-sites of MSU and five knowledge hubs operating in the city.

Focus-groups interviews (face-to-face and online) with Department of History academic staff helped to specify the roles of MSU academic staff and their vision of the university social role in the circumstances of hybrid warfare. In addition, on-line focus-group interviews with representatives of local NGOs who run five knowledge hubs were organized in October and December 2019 and January 2020. Total hours of the conducted interviews – over 15 hours.

Content analysis and comparative analysis were used to draw conclusions from the collected data.

During data collection and analysis, the following inadequacy was faced: while MSU reports contain strict numbers of events and participants, they lack description of events; whereas interviews with representatives of knowledge hubs and civil activists provided information about details of events (thematic foci, participants, debating topics), but failed to provide reports as written evidence.

### **Research results**

MSU is a rather new Ukrainian HEI (established in 1991), comprised of 5 faculties, with 3, 200 students, 300 of them are foreign students. Its academic staff amounts to 250 teachers grouped into 21 departments who provide 40 Bachelor and 32 Master Programs (Mariupol State University, 2019). Our analysis of MSU statutory documents, institutional by-laws (Statute, Strategy etc.) has not revealed reference to university social responsibility, third university mission, obligations of community engagement and the like. Judging from MSU web-site, the HEI has a rich cultural-social life and regularly holds cultural, social, educational events for students and potential students (school kids).

MSU is a partner to local self-government and a host of public fora, festivals, conferences etc. (Mariupol is currently the largest city in Donetsk and Luhansk regions and the only regional centre capable to host big national and regional events, like national forum "Donbass Recovery and Development", All-Ukrainian Youth Forum, East-Ukrainian Forum "Recovery through Dialogue" etc.).

Our interviews have revealed that MSU scholars are commissioned by local and regional authorities to provide advisory or consultative services; many members of academic staff are invited by local and regional TV stations, printed and electronic media to comment on political events or policy initiatives. But for different reasons these facts are not publicized in media or MSU web-site, individual or department web-sites, Facebook accounts etc. Information on

Department of History academic staff fulfilling the functions of knowledge workers for regional and local authorities and media is presented in Table 1.

MSU successfully operates EU Information Centre, "Window to America" Information and Resource Centre, the Baltic-Black Sea Regional Studies Centre, the Institute of Ukrainian-Greek Friendship and Hellenistic Studies, UNDP Centre for Research and Development, Italian and Polish Cultural Centres. Local Archaeology Museum is situated on the territory of MSU.

As a big cultural regional hub and conference centre, MSU is not accessible to small local cultural or volunteer initiatives due to excessive bureaucratic procedures. But the university supports cultural initiatives of staff and students (e.g. National Culture Days celebrated by foreign and Ukrainian students, dancing, singing etc.).

***Table 1 Academic Staff Participating in TV and Radio Programmes: Knowledge Services Solicited from MSU Department of History in 2017, 2018, 2019\****

	2017	2018	2019
Invitation to local TV and radio	11 scholars 20 broadcasts	11 scholars 27 broadcasts	13 scholars 32 broadcasts
Contribution to printed and electronic media	58 expert opinions, commentaries, interviews	46 expert opinions, commentaries, interviews	49 expert opinions, commentaries, interviews
Development and conduct of a sociological survey	Social-Political Situation in the Region (informal request from local self-government); Awareness of Ukrainian Citizen Rights and Duties (commissioned by local self-government)	Social-Political Situation in the Region (informal request from local self-government)	Social-Political Situation in the Region; Analysis of Political Positions of Local Population (informal request from local self-government)

*\*Based on the internal reports of MSU Department of History.*

Local knowledge hubs are informal education centres established by local NGOs and civic activists to unite, educate and entertain Mariupol community; they are platforms where general public and civic activists cooperate, share knowledge and experience, develop. There are 5 big knowledge hubs platforms: the Halabuda Project, the TU Platform, BETC Space (Business, Education, Technology & Co-working), Vezha: Creative Space and IZBA-Chytnalnia Intellectual Cafe.

Their activities are funded by grant programs and individual financial support. Their premises are not used to hold big international, national or regional events, but rather local initiatives.

All five were established after the attack of January 2015 and provide informal education: open lectures, seminars, presentations, public discussions and meetings.

At the same time, each of the knowledge hubs has its specialization: e.g. in addition to civic education, the Halabuda Project provides IT, painting and photography courses (Halabuda Project, 2020); BETC Space supports business and entrepreneurship initiatives and delivers free business courses for local inhabitants willing to start their own business (BETC Space (Business, Education, Technology & Co-working, 2020). Vezha: Creative Space is a free-of-charge co-working for civic activists. It was opened in 2018, but has already hosted over 50 educational activities and become a home of many ambitious local projects, one of them – a reconstruction project "Mariupol Central Square" presented to and supported by City Mayor (Vezha: Creative Space, 2020). Besides, Vezha: Creative Space is used as an exhibition hall for local artists.

The TU Platform is a place for the meeting of the representatives of local artists and NGOs who activities are involved into cultural life of the local community (TU Platform, 2020).

IZBA-Chytalnia Intellectual Café is a free zone for civic activists and a military-friendly café because its owner is an ex-military (IZBA-Chytalnia Intellectual Café, 2020). It welcomes NGOs working with the military and war-related military issues, like providing help to the army, organising psychological rehabilitation workshops, trainings in first medical aid, medical literacy, behaviour in extreme situations etc. Over 2017 – 2019, 54 training events were held (IZBA-Chytalnia Intellectual Café, 2020).

Civil society activists cooperate with local authorities, but they are rarely requested to provide expertise or invited as knowledge workers. Instead, they are looked upon as Vox Populi – citizen representatives who articulate opinions, attitudes, feelings of local population and present it to local and regional authorities in the form of "Opinion Reviews" or "Local Initiatives".

Quite often knowledge hubs, other NGOs solicit expertise from MSU provided by individual scholars and researchers as knowledge workers. For examples, the Halabuda Project during 2019 has invited 13 representatives of MSU academic staff to speak during public events, participate in discussions. It is worth mentioning that this knowledge hub was created on the initiative of MSU teachers and former students.

Neither of the knowledge hubs was ready to share their records of activities to assist us with more detailed analysis of their activities. Information on Department of History academic staff who provide expert support to the local knowledge hubs and NGOs is presented in Table 2.

**Table 2 Knowledge hubs Soliciting Knowledge Services from MSU Department of History in 2017, 2018, 2019\***

	2017	2018	2019
The Halabuda Project invitation to deliver public lectures	10	4	6
IZBA-Chytalnia Intellectual Café invitation to take part in discussions	4	3	Data non-available
A survey "Student Participation in Contemporary Social-Political Process" commissioned by NGO "MOBI: International Organization of Noble Initiatives"	+		
A survey among students on their vision of cultural initiatives / changes / innovations in the city of Mariupol for local authorities and NGOs regarding their participation in All-Ukrainian infrastructure development competition commissioned by Vezha: Creative Space			+

\*Based on the internal reports of MSU Department of History.

## Conclusions

We analysed the case of MSU, looking for evidence that this HEI is changing its mission and activities under the influence of numerous factors: citizens' traumas and unrest after MLRS attack, growing demand for information and knowledge services during hybrid war, proximity of frontline, loss of population due to migration, including student population, competition with other HEIs etc. It was verified in the course of research that social-political situation in the city of Mariupol and the region has not affected MSU's mission and strategy, which is reflected in university internal by-laws, policies and activities.

At MSU, social responsibility is primarily aimed at students: it is embedded as modernization of curricula, provisions of adequate educational environment, opportunities for self-fulfilment, entertainment and the like.

MSU provides services to its local community; among MSU external stakeholders two groups of clients dominate: 1) potential students, i.e. schoolchildren, and 2) regional and local authorities. The latter use MSU premises, organizational and expert support for large-scale regional, national, and international events. Such activities are of mutual benefit for the HEI and its partners, allowing students and staff to benefit from access to new knowledge, participation in discourse etc. and providing partners in the public sector with organizational support and expertise of MSU knowledge workers who are its major asset.

Currently, local civic activists, NGOs are not among MSU close partners.

Officially, the HEI does not promote its knowledge workers, nor recognizes their contribution to the discourse or activities aimed at community development, protection from hybrid warfare, social capital formation etc.

Most importantly, that in spite of lack of recognition and incentives from MSU leadership, academic staff is ready to provide knowledge services, as well as other services to local community, cooperate with media and civil society. In other words, MSU demonstrates awareness of the growing social role and responsibility at the individual level and refuses to recognize them at the institutional level.

In our initial hypothesis, NGOs were behind HEIs in extending services to the local community. In fact, it is not so: today Mariupol municipal knowledge hubs are fully integrated into local community, respond to its needs, closely cooperate with other community actors and combine several services, which makes them sustainable organizations. To put it differently, if compared to higher education, civil society sector remains a more proactive and flexible actor, capable of knowledge services delivery, contributing to social capital development, mobilising community for better security and self-service.

Local knowledge hubs have developed sufficient expertise (project management, winning grants etc.) that allow them to attract other community players and solicit services from knowledge workers outside their organizations. The scope of cooperation between knowledge hubs and academia is increasing with every year. MSU has advanced in its social role and community service in comparison with other Mariupol HEIs, though cannot claim the status of a civic university according to our initial hypothesis.

Meanwhile, the majority of Ukrainian HEIs prefer to stay distant from community life and societal challenges, focusing on teaching, learning and research. Isolationism of Ukrainian HEIs is an impediment for development of higher education sector, knowledge society and society at large. Under knowledge society, local communities, wider society together with HEIs and other knowledge-generating institutions become co-creators of new knowledge, participants in knowledge generation, testing and application. Community life, societal challenges provide impulses for new ideas, stimulating HEIs to generate more knowledge for solving real-life problems.

If isolated, HEIs are deprived of a potent source of knowledge and testing ground for their hypothesis and theories. Accordingly, society, local communities lack innovative ideas for solving problems in social, political, cultural, technological and other spheres. Overwhelmed with unresolved problems, society and communities direct resources (time, funding) to deal with problems, restricting support to knowledge generation, R&D activities, higher education.

The gravity of isolationism should be recognized by Ukrainian HEIs, their contribution to social change enhanced, cooperation between academia and community augmented, all resulting in a stronger society, nation, state.

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## PECULIARITIES OF MODELING TECHNIQUE TEACHING

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**Abstract.** *Based on a thorough analysis of psychological and pedagogical literature, main principles of didactics and cognitive psychology, through the prism of the works of prominent scientists of various years, modeling is considered as a powerful means of cognition which is used, as a rule, as an effective technique and teaching tool. The purpose of the article is to demonstrate the confirmation of the hypothesis that, when directive teaching the modeling method, the structure of the student's mental activity changes, directive learning leads to improving the overall success of higher learning, and this can be expected to have a significant impact on future practical activities of an engineer. The analysis is carried out and the features of usage and advantages of application of the modeling method as a method of physics teaching are determined. It was justified that the use of the modeling method in teaching students of technical specialties offers the possibility to develop professionally significant skills, including the methodological knowledge of modeling that is so important for a modern specialist. There were used the following methods to solve the desired goal: the analysis of the scientific works regarding the matters under the inquiry; generalization of the own pedagogical experience, questioning, observation and generalization, mathematical processing of the obtained statistics.*

**Keywords:** *modeling, modeling technique teaching, physical phenomena.*

### Introduction

At present, in pedagogical literature, the task of organizing training process in such a way as to maximize the mental development of students is urgently set. The restructuring of the very nature of learning, aimed at intensifying this process, just pursues changing the structure of mental activity of students in the learning process as its main goal. The restructuring of the very nature of learning, aimed at intensifying this process, just pursues changing the structure of mental activity of students in the learning process as its main goal. Considering learning as a process of solving series cognitive tasks, gradually becoming more complex in terms of content and methods of activity, we must single out the cognitive actions

required for their successful solution. Both tasks and actions are very diverse. They depend on the specifics of academic subjects, on the goals set in academic course unit study. It is natural that in the process of learning, modeling techniques inherent in physics are studied spontaneously. But a much greater effect is achieved when the main thing in student's activity is not just the acquisition of a certain amount of models used by physics, but their conscious targeted use in solving specific problems. Only that information that is somehow consonant with the needs of the learner undergoes mental processing. Assuming that the structure of the student's mental activity changes with the modeling technique directive training, we put forward the hypothesis to be tested that such directive training leads to an increase of the overall performance at a university, and this can be expected to affect the future practical work of an engineer. The purpose of the article is to demonstrate the confirmation of the hypothesis that, when directive teaching the modeling method, the structure of the student's mental activity changes, directive learning leads to improving the overall success of higher learning, and this can be expected to have a significant impact on future practical activities of an engineer.

There were used the following methods to solve the desired goal: the analysis of the scientific works regarding the matters under the inquiry, synthesis of ideas; generalization of the own pedagogical experience, questioning, observation and generalization, mathematical processing of the obtained statistics,

### **Literature review**

Yu. Samarin, studying the associative nature of mental activity, suggests that the process of assimilation of knowledge is associated with the formation of increasingly complex systems of interconnected concepts (from local associations to intersystem ones) (Samarin, 1962). N. Levitov believes that mental development is characterized by such indicators as independence of thinking, resourcefulness in non-standard problems solving (Levitov, 1960). E. Kalmykova traces a change in the structure of mental activity in the emergence of an ever-increasing "economy of thinking" (the number of arguments on the basis of which a new pattern is highlighted) (Kalmykova, 1981). B. Ananyev connects mental development with independence in the formulation and solution of various problems (Ananyev, 1980). N. Leites believes that mental abilities are characterized by the possibility of theoretical learning (Leites, 1971), E. Kabanova-Miller holds the view that the main criterion for mental development is the "wide and active transfer" of the developed techniques of mental activity from one object to another (Kabanova-Miller, 1968).

Considering learning as a process of solving series cognitive tasks, gradually becoming more complex in terms of content and methods of activity, we must

single out the cognitive actions required for their successful solution. Both tasks and actions are very diverse. They depend on the specifics of academic subjects, on the goals set in academic course unit study. Unfortunately, as noted by G. Shchukina, there are no studies that “would reveal the mechanism of dependence and correspondence of the task itself and the actions of students caused by it. So far, these processes are given separately by researchers” (Schukina, 1979). This problem is the subject of many didactic studies. There are works of I. Lerner which provide a classification of cognitive tasks in the study of history. The classification is based on the subject content of cognitive tasks. The work of N. Menchinskaya, E. Kabanova-Miller and other famous didacticians are devoted to the study of methods for solving cognitive problems. M. Danilov in his work “The Learning Process in the Soviet School” formulated the most important rules for tasks advancement. First of all, the cognitive task must flow from the subject matter, so that the knowledge system and the logic of science are preserved (Danilov, 1960). When setting the task, it is necessary to take into account the level of development of students in order to create real conditions for their fulfillment. However, the task must contain elements of novelty, otherwise the teaching will not advance students in their development.

It is natural that in the process of learning, modeling techniques inherent in physics are studied spontaneously. But a much greater effect is achieved when the main thing in student’s activity is not just the acquisition of a certain amount of models used by physics, but their conscious targeted use in solving specific problems. Only that information that is somehow consonant with the needs of the learner undergoes mental processing. Therefore, when developing a strategy for studying the course of physics, we this circumstance was taken into the consideration.

The course of general physics has great potential for the formation of the ability to build models, since the study of any physical phenomenon begins with the construction of its model.

The analysis of combining the study of a course in general physics with the study of methods for constructing models of physical phenomena and working with them was carried out using the case of the following specialties: “Power Engineering”, “Industrial Engineering”, and “Technologies in Catering Business”. It turned out that this could be done without prejudice to the physics course itself, and even made it possible to make the course treatment more consistent and logical. In addition, the use of the modeling method in the study of physics allows to solve the main problems facing the course itself:

- 1) enables students to discover that the whole variety of natural phenomena and laws that describe them are permeated by general principles that are somehow contained in every phenomenon, law and which form the foundation of modern physics;

- 2) prepares students for the constant independent gaining new knowledge;
  - 3) leads to an increase in the overall success of studies at a university.
- There are three ways to study a physics course: lectures, seminars, and laboratory practicals. Each of these types of classes performs its specific functions. At the lecture, students get acquainted with the basic concepts that form the foundation of their future physical worldview and are structural units in the construction of models; get acquainted with the methods of building models. If the lecture lays the foundation for scientific knowledge in a generalized form, practical exercises are designed to deepen, expand and detail this knowledge, they should form the most important skills that help to build models of physical phenomena. Laboratory practicals are designed to show how the model and the experimentally observed physical phenomenon are related (Nikandrov, 1971).

Such an approach to the construction of the course made it possible to organically combine the study of physics with the study of the method of modeling physical phenomena, move away from practice when it states “acquired knowledge, but does not mention who got it and how.”

Assuming that the structure of the student’s mental activity changes with the modeling technique directive training, we put forward the hypothesis to be tested that such directive training leads to an increase of the overall performance at a university, and this can be expected to affect the future practical work of an engineer.

Our hypothesis was experimentally tested at the Academic and Scientific Institute of Restaurant and Hotel Business and Tourism of Donetsk National University of Economics and Trade named after Mykhailo Tugan-Baranovsky (DonNUET). The specifics of this institute is that students, starting from the second year, are involved in the direct industrial activities of the DonNUET laboratories (from two days a week during the second year of Studying, to four in the fourth one). All students carry out term papers and graduation thesis related to the subject of the institute’s laboratories, i.e. training is very closely intersected with their activities in the laboratory. Special courses for students are taught by engineers and researchers. All this allows us to judge the success of students’ practical activities in laboratories by the performance of senior students. And this, as it seems to us, allows us to judge the success of their future independent activity as an engineer. To test this hypothesis, we analyzed the results of examinations of special physics courses by students of the institute. Among these special courses are theoretical physics, semiconductor physics, thin-film physics, nuclear physics, etc. The students of the experimental group got acquainted with the modeling method when studying a course in general physics, while students of the control group (60 people) were not trained in this method targetedly. It turned out that the

overall progress in special physics courses of students studying the modeling method, all other things being equal (the same initial level – entrance exams, the same progress in mathematics, the same performance level in mechanics and engineering graphics), is higher than that of the students not studying the simulation method. Significant difference by Student's criterion at the level of  $\alpha = 0.01$ .

The analysis of experimental data indicates that training in the method of modeling contributes to the success of training at a university and, apparently, will positively affect future activities of an engineer.

The ability to build models and work with them at the university is not specifically taught. This may be evidenced by a study carried out by Russian scientist N. Tretyakova. She conducted a survey of 120 graduates of technical universities of the country. While being asked the question "Do you know how to create models of physical phenomena?" only 20% of the graduates who participated in the survey answered positively, 80% of the graduates generally ignored the question. Of the 24 respondents, only 5 graduates noted the maximum skill (2 points), 8 rated their skill with a score of 1, and 11 graduates with a score of 0 (Tretyakova, 2019).

The results of our survey of researchers and engineers also indicate that the third-year students who come to internship have poor knowledge of modeling methods.

This skill can be taught during special courses in the process of performing professionally-oriented self-directed work of students, which provides interdisciplinary relationships and allows the effective use of simulation methods on computers of various design and technological processes.

An engineer has to apply his ability to build models in a wide variety of settings (starting with the ability to imagine the future behavior of an undeveloped machine and ending with the ability to imagine the behavior of an unformed team).

While analyzing the literature on the use of the modeling method in the educational process in higher education, it should be noted that there are practically no works that would consider the structure of the teacher's activities, ensuring the development of one of the students' basic general engineering skills – the ability to model various processes and phenomena.

**The ability to model the behavior of a system is associated with a certain ratio of figurative and verbal components of thinking.** In the psychology of thinking, there is a lot of data testifying the active role of figurative components in mental activity (I. Akimova, B. Ananyev, Z. Dedovets, V. Fedoseev, O. Malykhin, M. Rodionov, G. Shabanov and others). Studying their specific relationship for engineers of different specialties is an independent research task, but for all engineers it is necessary to have a universal set of spatial images

(vectors, graphs, potential reliefs, etc.), which are the language of engineering problem analysis. Therefore, in a technical department of university in the process of selecting and constructing educational information, it is necessary to pay special attention to the development of figurative patterns among students (Rodionov, Fedoseev, Dedovets, Shabanov, & Akimova, 2018).

To form professionally significant skills among students, the teacher needs to develop a long-term exposure program. Modeling of the expected results and the development of a teacher's activity strategy involves, first of all, determining the appropriate pedagogical influences. The requirements for the teacher are specified as requirements for his ability to select, systematize and state educational information, which is the material of the mental activity of students in the process of cognition. We adhere to a point of view that considers thinking as a reversible translation of information from the language of images of different levels of generalization into the language of sign systems (B. Ananyev, A. Dorrer, T. Ivanilova, B. Sovetov, S. Yakovlev etc.). The most optimal way of presenting educational information is to correlate figurative and verbal units of the model in accordance with the process of converting information received by a person. Therefore, ***the teaching methodology should be based on the development of figurative patterns, methods of coordination of figurative and verbal structures.*** It is known that imperfect methods of activity of a teacher form imperfect ways of activity of students. In addition, the progress in mastering the methods of cognitive activity is determined by the type of training in which these methods are learned. Therefore, first of all, it was necessary to study the lecture activity of the teacher on the formation of students' ability to model physical phenomena. T. Kuchina developed a map for monitoring the activities of the teacher. The following was recorded in the map during the lecture:

- 1) the form of the problem statement, which will be discussed in lectures;
- 2) the preferred form of the lecture delivering;
- 3) types of visual aids used by the lecturer;
- 4) types and number of images used in the class;
- 5) operations performed on images (rotation, overlay, shift, etc.);
- 6) the use of techniques for working with the model related to the figurative part;
- 7) a form for discussing the results of lectures, etc. (Kuchina, 1984).

It turned out that in the sample of 57 physics teachers from different universities of the country (90% of them are professors and associate professors, 83% of teachers had more than 10 years of teaching experience, 92% - with more than 10 years of research experience), two groups of teachers stood out. Group A (40% of the teachers in our sample) uses a combination of figurative and verbal forms of information and Group B (60% of teachers) – the presentation is mainly in verbal form.

## **Research results**

Consideration of the grouping the teachers by length of lecture work revealed the following.

In group A there are no teachers with a lecture experience of 5-10 years. The beginning of a new activity, entry into it is associated with the predominance of the figurative component of thinking, as the stereotype of the activity is developed, the presentation of educational information is increasingly verbalized. According to our observations, teachers with more than 5 years of lecturer experience often use verbally expressed images that do not detail figurative information. We can assume that as you master the course, the images do not disappear from the mental activity of the teacher, but acquire a convoluted, generalized character. The consideration of figurative thinking as one of the levels of mental processing and transformation of information is characteristic of modern concepts of thinking. Moreover, at each subsequent level there is a gradual compaction of information, an increase in the degree of its abstraction, generalization. With regard to the educational process, the lack of detailing of figurative information, the jump from a simple image to a generalized one without showing the dynamics of the image development should be attributed to the disadvantages of the lecture method, since this makes it difficult for students to understand the material presented.

Experience (long work experience) itself does not lead to structural changes in the activities of the teacher, characteristic of a productive type of activity (Kuchina, 1984). There are teachers with experience of over 10 years in both groups: in group A – 26%, in group B – 39%. The teachers of group A are characterized by a focus on the pedagogical activity along with the scientific one (46% of teachers), or on pedagogical (44%), while 67% of the teachers of group B are focused only on scientific activity. The interest in pedagogical work, the desire to do it, to achieve certain progress lead to the analysis of possible difficulties for students, the desire to generalize, systematize educational information, convey it to students using all available means. The existence of correlation between the orientation, the predominant form of presentation ( $r = 0.71$ ), the form of discussion of the results ( $r = 0.71$ ) can confirm this, and lecture experience also affects ( $r = 0.76$ ).

The results of the correlation analysis showed that the teachers of group B (half of them have university degrees) are characterized by the desire to theorize the presentation of the course of physics, which is manifested in the use of a significant number of formulas, images of imagination and mainly the verbal form of presentation. They are dominated by the didactic principle of science to the detriment of the principles of visibility and accessibility.

To find the optimal structure of the teacher's activities, providing students with the ability to model physical phenomena, T. Kuchina developed a scale of skill levels in this type of activity. This allowed to analyze and compare the structure of the activities of teachers of various skill levels (Kuchina, 1984).

The main differences were revealed in the constructive, design and gnostic components of the activity.

The greatest differences are revealed in the constructive skills of teachers of different skill levels. Master teachers take into account the peculiarities of perception and assimilation of educational information by students and, in accordance with this, design their presentation, are able to compose various task systems for students in order to form their basic general engineering skills, when presenting educational information, they widely use a combination of figurative and verbal forms of presentation, They know how to coordinate various forms of presenting this information well.

In the revealed structure of the skills of teachers of different skill levels, the main differences are associated with constructive skills, which are largely determined by the degree of development of figurative patterns. Therefore, in educational systems engaged in the training of teachers (universities, pedagogical universities), it is necessary to pay special attention to the development of constructive abilities, constructive skills of future teachers. An analysis of problem solving by graduates of the Academic and Scientific Institute of Restaurant and Hotel Business and Tourism of Donetsk National University of Economics and Trade named after Mykhailo Tugan-Baranovsky (50 people) showed that tasks that require passing from one image using conceptual processing to another caused the greatest difficulties (the progress rate was 18%), while the problems solved at the verbal level (formula level) did not cause difficulties (the progress rate was 79%).

## **Conclusions**

Our observations over the methodology of lectures and practical classes delivering by teachers who successfully form the basic general engineering ability of students to model physical phenomena showed that the distinctive features of their information design activities are: the use of review lectures using educational television to show a system of models with an emphasis on the development of images; problematic lectures organization (moreover, the creating of a problematic situation at the lecture is applied both in the figurative and verbal part of the model).

Thus, at present, modeling has become a general scientific tool of cognition, so future engineers, and especially research engineers, must be knowledgeable about modeling techniques.

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# DOKTORANTŪRAS KVALITĀTE: IZAICINĀJUMI UN NĀKOTNES PERSPEKTĪVAS

## *The Quality of Doctoral Studies: Challenges and Future Perspectives*

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**Abstract.** *The doctorate studies are one of the highest degrees given by a university. Doctoral studies provide students with training in research techniques. The doctoral studies involves the presentation and preparation of the most value activity named as doctoral thesis. There are a lot of doctoral programmes whose specific objectives are to train researchers to successfully address the challenges of new researched science ECT. Nevertheless the global tendency shows that doctoral studies must be transformed to promote innovative and comprehensive research degree and the particular system of the doctoral study process. The aim of the study is to research the key issues of the quality of doctoral studies from the perspective of innovation and digitalization era in educational system in Europe as a whole and in Latvia.*

**Keywords:** *doctoral studies, education, quality*

### **Ievads**

#### ***Introduction***

Doktorantūra ir zinātņu doktoru sagatavošanas sistēma, kas pēc būtības ir vērsta uz pētniecību. Doktorantūras ietvaros tiek sagatavots promocijas darbs un tā prezentācija. Sagatavotajam darbam ir jābūt pēc iespējas oriģinālākam (Doktorantūra definīcija Latviešu valodā, 2020). Jāatzīmē, ka mūsdienās oriģinalitātes jautājums no vienas puses paliek aizvien sarežģītāks, savukārt no otras puses tiek sperti vairāki soļi pētniecības sistēmā, lai veicinātu oriģinālpētījumu izstrādi. Doktorantūras ietvaros pētniekus apmāca pētījuma tehnikai, ar mērķi veiksmīgi risināt jautājumus, kas saistīti ar jauno zinātņu, tehnikas un metodoloģijas izaicinājumiem.

Vairums akadēmisko, un ne tikai akadēmisko institūciju uztver kā virsotni izglītības sistēmas sasniegumā (Jairam & Kahl, 2012). Kā ir atzīmējusi augstākās izglītības eksperte Ph.d. C. Mileet, doktorantūras studiju laikā, veicinot ciešu doktoranta un augstākās izglītības iestādes sadarbību, tiek audzināta jauna nākotnes zinātnieku paaudze. Taču atbildību par to, cik progresīvs būs jauno

zinātnieku darbības virziens, pilnā mērā uzņemas augstākās izglītības iestāde (Millett & Nettles, 2006). Ir jāpiekrīt minētajam apgalvojumam, augstākās izglītības iestādes, kas realizē doktorantūras procesu rada jaunajam doktorantam ne tikai pētniecības kvalitātes virzienu, bet arī virza viņa profesionālo pētniecības aktivitāti, atbilstoši mūsdienu tendencēm. Doktoranti rada jaunas idejas, kā arī zināšanas, kuras nākotnē var kļūt par pamatu jaunām inovācijām pētāmajās sfērās. Patiess ir arī apgalvojums, ka doktoranti pētniecības procesā ir starpnieki savu ideju apmaiņai starp augstāko izglītības iestādi un uzņēmumu, kas tiek saprasts ar to vajadzību apmierināšanu pētniecības jomā, kā privātā sektora pieprasījums pēc teorētiskās bāzes nodrošināšanas (Thune, 2009).

Pētījuma tēmas aktualitāti nosaka vairāki faktori. Pirmkārt, vēlme attīstīt un uzlabot izglītības sistēmu kopumā, tādējādi veicinot augstākās izglītības kvalitātes un profesionalitātes potenciāla attīstību valstiskā līmenī, kas ir vadošais faktors jebkuras valsts attīstībā. Otrkārt, straujš augstākās izglītības iestāžu skaita pieaugums Eiropā, kas piedāvā doktorantūras studiju procesa apgūšanu. Šī pētījuma mērķis ir sniegt ieskatu doktorantūras procesa kvalitātē, kā arī izaicinājumos attiecīgā procesa nodrošināšanā, ņemot vērā mūsdienīgas tendences digitalizācijas jomā.

Pētījuma objekts ir tiesību normas un attiecīgi radušās tiesiskā rakstura attiecības, kas saistītas ar doktorantūras procesa nodrošināšanu.

Lai tiktu izpildīti pētījuma uzdevumi un sasniegts pētījuma mērķis, ir izmantotas vairākas pētījuma metodes: salīdzinošā metode, analītiskā metode, deduktīvā un induktīvā metode. Pētījumā tika izmantotas arī tādas tiesību normu iztulkošanas metodes kā vēsturiskā, gramatiskā un teleoloģiskā, ar kuru palīdzību veikta gan tiesību normu satura, gan arī teksta izvērtēšana un izziņāšana.

Pētījuma teorētisko bāzi veido Latvijas un ārzemju mūsdienu zinātnieku darbi un atziņas, nacionālie un starptautiskie tiesību akti, kā arī zinātniskā literatūra, zinātniskie raksti utt.

### **Doktorantūras sistēmas vispārīgs raksturojums no Boloņas procesa perspektīvas**

#### ***General characteristics of the doctoral education through the Bologna process***

Boloņas procesa ietvaros doktorantūra tiek atzīta par trešo augstākās izglītības ciklu. Pēc būtības studiju uzsākšanas brīdī jaunie doktoranti doktorantūras procesā tiek uzskatīti par jauniem pētniekiem, kuri būtu jāapvelta ar nepieciešamām un tai pat laikā samērojamām tiesībām. Atbilstoši Boloņas procesa būtībai, Eiropas universitātēm un valsts iestādēm kopumā ir kopīga atbildība par doktorantu un jauno pētnieku statusa un nosacījumu izskatīšanu.

Boloņas procesa ietvaros tiek sinhronizēta un saskaņota Eiropas augstākās izglītības telpa, tai skaitā arī doktorantūras jomā. Minētā pieeja attīsta un virza uz

inovācijām Eiropas pētniecības tradīcijas. Tomēr, ja Eiropas universitātes vēlas gūt panākumus doktorantūras procesa realizācijā, globālajā tirgū ir jārod jauna pieeja, tai skaitā arī komunikācijā, sadarbībā starp augstākās izglītības iestādēm un potenciālajiem doktorantiem (Baptista, 2016)

Boloņas procesa piedāvātais modelis norāda uz neaizvietojamu sociālās un cilvēku izaugsmes faktoru mijiedarbību, konsolidējot un bagātinot sabiedrības attīstību kopumā un tās kompetences, lai mūsdienīgi pieņemtu jaunus izaicinājumus (Bologna Declaration, 1999).

Boloņas process jeb reforma, kas skar tai skaitā doktorantūras studijas, ir balstīts uz pārrobežu akadēmisko sadarbību, uzticēšanos veiksmīgai mācību mobilitātei, kvalifikāciju savstarpējo atzīšanu utt. Studiju procesa kvalitātes uzlabošana, tai skaitā arī doktorantūras ietvaros ir Boloņas procesa viena no galvenajām misijām un virsuzdevumiem, jo reformas īstenošana daudzu valstu kontekstā ir komplicēta un nevienmērīga. Zīmīgi ir tas, ka Boloņas process nodrošina arī pamatvērtību noteikšanu attiecībā uz jautājumiem, kuru pamatā ir akadēmisko principu noteikšana, universitāšu un studentu, tai skaitā, doktorantu līdzdalība un sadarbības attiecīgajā procesā.

Viena no pamatvērtībām doktora izglītības organizēšanai ne tikai Latvijā, bet Eiropā kopumā ir dažādība. Izpētot doktorantūras piedāvāto programmu klāstu, tendence norāda uz to, ka šobrīd doktorantūras studiju process, pateicoties tai skaitā Boloņas procesam, ir kļuvis par strukturētu. Tiek piedāvātas programmas, kuru sastāvā ir strukturētas programmas ar noteiktiem un konkrētiem pētniecības posmiem. Mazāk tiek īstenoti individuālie doktorantūras studiju modeļi.

Kopumā jāatzīmē, ka uzmanība izmaiņām doktora līmeņa studijām tika pievērsta jau 2003.gadā, kad Boloņas procesa pārraudzības grupa aicināja Eiropas Universitāšu asociāciju uzsākt darbu pie priekšlikumu izstrādes doktora līmeņa studiju saturam un procesam kopumā (Sursock, 2016).

Jau 2005.gadā, kad tika Zalcburgas universitātē pieņemti Boloņas procesā ietvertie principi, Eiropas līmenī tika uzsāktas aktīvas darbības doktora līmeņa studiju procesa izmaiņu ieviešanā. Veicamo izmaiņu mērķis tika definēts kā vispārējās kvalitātes uzlabošana doktora līmeņa studiju programmās, kur, savukārt, pamatuzdevums būtu nostiprināt augstskolu līmenī doktorantūras programmas. Vienlaikus būtu arī jāizveido pētniecības struktūras, kas nodrošinātu dinamisku un inovatīvu pētniecības vidi (Sursock, 2017).

### **Doktorantūras globalizācija un kvalitātes paaugstināšana** *Globalization and improvement of quality of doctoral education*

Pieņēmums, ka doktora izglītība ir galvenā universitātes misija tiek uzskatīts par patiesu, jo tieši doktora līmeņa studiju process un izglītība kopumā nodrošina ne tikai akadēmisko aprindu pētnieku izglītošanu, bet arī plašākās sabiedrības

izglītošanu. Pētnieki, kas spēj iegūt inovatīvas un oriģinālās zināšanas, attīsta gan tautsaimniecības vidi, gan kopējo sociālo sabiedrības izglītošanu. Strādājot pie doktora izglītības nodrošināšanas, primāri izglītības iestādēm būtu jānodrošina visaptverošs redzējums, kas balstīts uz doktorantūras izglītības lomu sabiedrībā kopumā, kā arī raugoties no starptautiskās perspektīvas. Tikai pie šādiem nosacījumiem varētu īstenot tādu doktora studiju programmu, kas spētu pilnā mērā atklāt doktora studiju programmas potenciālu globālajā tirgū (Shin, Kehm, & Jones, 2018).

Ekonomikas globalizācijas un tādejādi arī digitalizācijas laikmetā liela nozīme ir pastiprinātai starptautiskajai mijiedarbībai, kas savukārt norāda uz globālās sistēmas un globālo procesu parādīšanos izglītības sistēmā, tai skaitā arī doktorantūras studiju virzienā.

Jaunu zināšanu sniegšana un izpēte kļūst arvien pieprasītākā it īpaši jomās, kas mūsdienās ir kļuvušas par neatņemamu progresa sastāvdaļu. Mākslīgā intelekta starpdisciplinārā izpēte, kosmosa tiesību izpēte utt. ir jomas, kas šobrīd tiek pastiprināti pētītas tai skaitā arī no doktorantu, kā jauno pētnieku puses. Būtiski ir doktorantūras studiju līmenī piedāvāt pēc iespējas modernāko un uz sadarbību vērstu pētījumu virzienu attīstību.

Pētnieku, doktorantu panākumi veicina doktora līmeņa izglītības lomas palielināšanu globālajā tirgū. Valstis, kuras vēlas kļūt par nozīmīgiem spēlētājiem ne tikai nacionālā, bet arī globālā tirgū zināšanu ekonomikas jomā, sper svarīgus soļus pētnieciskās inovācijas attīstībā. Minētais tiek primāri nodrošināts doktora studiju programmas kvalitātes kontekstā (Hyatt & Stuart, 2018).

Doktorantiem jābūt motivētiem un tendētiem uz kvalitatīva pētniecības rezultāta sasniegšanu. Ja doktoranti tiek atbalstīti un nacionālā līmenī nodrošināti ar mūsdienīgām pētnieciskajām vajadzībām, viņi aktīvāk iesaistās ne tikai akadēmiskās vides darbībā, bet arī starpnacionālā vidē. Doktorantu darbs transnacionālā kontekstā ir liels atbalsts Eiropas Savienībai starptautiskā un globālā mēroga problēmu izpētei un atpazīšanai (Nerad, 2008).

Doktora grādam kopumā piemīt izšķiroša loma izglītības virzienu noteikšanā un zināšanu radīšanā. Doktora grāda ieguvēji tiek uzskatīti par inovāciju un jauninājumu avotu, kas pētniecības aspektā sniedz jaunas iespējas un attīstības virzienus. Tas ir viens no iemesliem, kāpēc pasaules mērogā tiek sniegts liels tehniskais un zinātniskais atbalsts doktora studiju programmu realizēšanai, vienlaikus arī izvērtējot esošās izglītības trūkumus, kas pēc būtības noved pie reformām un arī inovācijām (Doctoral education – Taking Salzburg forward. Implementation and new challenges, 2016).

Pie inovatīvās pētniecības priekšrocībām un arī to attīstītības traucējošā faktora var attiecināt digitalizācijas izaicinājumus. Tā kā doktorantūras programmas īstenošanas loma lielā mērā ir tieši izglītības iestādēm, tad ar digitalizāciju saistītās problēmas tiešā veidā ietekmē iestāžu darbu un spēju

nodrošināt atbilstoši kvalitatīvu procesu. Digitalizācijas nozīme ir saistīta ar datu mainīšanās procesu, proti, datu pārvēršanu digitālā formā, ko dators var viegli nolasīt un arī apstrādāt (Definition of digitization noun, 2020). Minētais process cieši saistīts ar lielo datu izmantošanu pētniecībā un atklāto pētījumu jautājumu. Doktorantūras studiju programmas studenti, doktoranti, savā ikdienas darbībā saskarās ar strauju un aktīvu datu apmaiņu, informācijas apmaiņu interneta vidē. Doktoranti izmanto dažāda veida informācijas apmaiņas potenciālu sava pētījuma rezultātu iegūšanai. Doktorantu pētījumi, pētījumu rezultāti interneta vidē tiek pārsūtīti no viena adresāta otram, tiek veidoti atvērtā veida direktorijas, informācijas turētājsistēmas, kā arī tiek pieņemts *open access* princips publikāciju izvietojšanai.

Neskatoties uz pētniecības procesa atvieglojumiem, doktorantiem digitalizācijas aspekts uzliek lielāku slodzi izglītības iestādēm. Iestādēm ir nepieciešams strādāt pie saskaņotas politikas pētījumu veikšanai digitalizācijas jomā, jārisina arī jautājumi par infrastruktūras piemērošanu, atbilstoši mūsdienīgām pētījumu metodēm. Pie minētā būtu attiecināmas ne tikai tehniskā rakstura problēmas, bet arī jautājumi, kas izriet no juridiskā un pētnieciski ētiskā rakstura problēmām (Hasgall & Saenen, 2019).

Iestāžu politika attiecībā uz, piemēram, atklāto pētījumu uzraudzību, skaidru to politikas izstrādi attiecīgajā jomā, ņemot vērā digitalizācijas aspektu, būtu viens no svarīgākajiem jautājumiem. Lai nodrošinātu veiksmīgu doktorantu pētījumu veikšanu digitalizācijas laikā, ir vajadzīgs pievērst lielu uzmanību starpiestāžu un arī doktorantu un izglītības iestāžu sadarbībai. Dialoga nodrošināšana pušu starpā palielinātu efektivitāti pētniecības politikas inovatīvai attīstībai. Jāatzīmē, kas izglītības iestādēs ir ierobežotas doktorantu iespējas pētniecības procesa kontrolēšanā, it īpaši jautājumā par digitālo rīku izmantošanu pētniecībā (Preez, 2018)

### **Jauns doktorantūras ietvars Latvijā** *New framework for doctoral studies in Latvia*

Digitalizācijas izaicinājumi ir skāruši visus sabiedrības līmeņus. Digitalizācija ir milzīgus ieguvumus, bet vienlaikus tā rada arī sarežģītas problēmas, piemēram, aktualizējas tādi jautājumi, kā datu kontrole, informācijas pārpilnību identificēšana utt. Mūsdienu zinātnieki, pētnieki, labāko rezultātu sasniegšanai sadarbojas ar sociālo un humanitāro zinātņu kolēģiem, tas notiek arī doktorantūras līmenī. Sadarbība tai skaitā arī pētījumu digitalizācijas jomā kļuvusi par neatņemamu pētniecības sastāvdaļu. Minētais ir aktuāls arī doktorantūras programmas studentiem Latvijā, kur notiek pārmaiņas doktorantūras ietvarā.

Saskaņā ar Latvijas Zinātniskās darbības likuma 11.pantu doktora zinātnisko grādu personai piešķir pēc sekmīgas promocijas darba aizstāvēšanas Promocijas padomē. Minētajā likumā ir norādīts, ka ar promocijas darbu zinātniskā grāda pretendents apliecina, ka viņš ir patstāvīgi veicis oriģinālu zinātnisku pētījumu, prot patstāvīgi plānot pētījumu, ir apguvis pētījumu veikšanas metodoloģiju un darbam specialitātē nepieciešamās metodes, spēj patstāvīgi analizēt iegūtos rezultātus un izdarīt tiem atbilstošus secinājumus. Vienlaikus, likumā ir norādīts, ka doktorantam ir tiesības aizstāvēt promocijas darbu pie nosacījuma, ka ir apgūta akreditētas doktora studiju programmas akadēmiskā daļa. Saskaņā ar 2005.gada 27.decembra Ministru kabineta Nr.1000 "Noteikumi par doktora zinātniskā grāda piešķiršanas (promocijas) tiesību deleģēšanu augstskolām" valsts ir deleģējusi doktora zinātniskā grāda piešķiršanas (promocijas) tiesības augstskolām. (Zinātniskās darbības likums, 2005.)

Ņemot vērā Pasaules bankas pētījumus, doktorantūras studijas Latvijā ir sarežģītas, arī to struktūra nav vērtējama pozitīvi (Pētījums par augstākās izglītības pārvaldību sadarbībā ar Pasaules Banku, 2018). Līdz ar to, kā arī ņemot vērā dažādā rakstura ieteikumus, Latvijā tiek uzsākts darbs pie jauna doktorantūras modeļa izstrādes. Jau 2016.gadā Latvijas valdība par vienu no prioritātēm ir noteikusi doktora līmeņa studiju programmas un promocijas sistēmas kopumā uzlabošanu. Īpašu uzmanību pievēršot doktorantūras studentu pastiprinātai iesaistīšanai zinātniskajos projektos pētniecībā. Strādājot pie attiecīgo prioritāšu īstenošanas un pie procesa uzlabošanas kopumā, secināms, ka liels slogs šo izmaiņu nodrošināšanā gulsies uz izglītības iestādēm, palielināsies iestāžu atbildība par pētnieciskā darba vadību doktorantūras laikā, promocijas darba kvalitāti. Pasaules Bankas ziņojumā ir norādīts, ka ir jānosaka mācību rezultāti doktorantūras līmenī, tas veicinās doktorantu lielāku iesaisti pētniecībā un tādejādi attīstīs dažādas ar pētniecību saistītas kompetences, kas viņus sagatavos akadēmiskajai karjerai ne tikai akadēmiskajā vidē, bet arī ārpus tās. (Pētījums par augstākās izglītības pārvaldību sadarbībā ar Pasaules Banku, 2018).

Izpētot Rīgas Stradiņa universitātes doktorantūras studiju programmas Juridiskās zinātnes saturu, secināms, ka galvenie uzdevumi ir sagatavoties akadēmiskajam darbam augstskolā, apgūt juridiskās zinātnes apakšnozares jaunākās pētījumu metodes un prasmi pielietot tās praksē, sagatavot augsti kvalificētus tiesību zinātniekus, kuri spēj konkurēt vietējā un starptautiskajā juridisko zinātņu tirgū kā arī apgūt jaunākās informācijas tehnoloģijas, pētījumu plānošanas, datu apstrādes un pasniegšanas (prezentācijas) paņēmienus. (Studiju programma - Juridiskās zinātnes. Doktorantūra, 2020). Savukārt pētot Latvijas Universitātes doktora studiju programmu tiesību zinātne, secināms, ka tiek noteikti tādi studiju programmas uzdevumi, kā padziļināti apgūt juridiskās zinātnes apakšnozarē izvēlētos studiju kursus un kārtot tajos pārbaudījumus, apgūt juridiskās zinātnes apakšnozares jaunākās pētījuma un zinātniskās analīzes

metodes, iegūto datu apstrādes un pasniegšanas (prezentācijas) paņēmienus, izmantojot jaunākās informācijas tehnoloģijas, kā arī studijās citās ārvalstu augstskolās gūto pieredzi un iemaņas utt. (Doktora studiju programma Tiesību zinātnē, 2020).

Aplūkojot Ventspils universitātes doktora studiju programmu, secināms, ka tajā tiek definēti šādi uzdevumi: augstākās kvalifikācijas pētnieku sagatavošana, teorijai un praksei nozīmīgu promocijas darbu, monogrāfiju, mācību grāmatu un līdzekļu, kā arī zinātnisku publikāciju sagatavošana, kā arī zinātniskās pētniecības rezultātu popularizēšana starptautiskajās konferencēs un semināros, kā arī populārzinātniskajos izdevumos (Doktoru studiju programma, 2020). No iepriekšminēta secināms, ka studiju programmās uzdevumos iekļautais ne vienmēr skaidri un nepārprotami definē tai skaitā arī Boloņas procesā vairākkārtīgi uzsvērtu attīstības pieeju, kuras pamatā pētniecības un doktora studijas kopumā būtu jāvirza inovācijām. Tas attiecās gan uz pašu programmu izstrādi, gan arī tajā ievērtu studiju kursu apguvi. Kopumā, jāatzīst, kas Pasaules Bankas ziņojumā piemīnētā aktualitāte attiecībā uz tehnoloģiju attīstību un procesa modernizāciju doktoru studiju procesā Latvijā tiek īstenota un problemātika ir saistīta ar īstenošanas mehānismiem, piemēram, inovatīvo pētniecības rīku iestrādāšana attiecīgajās programmās.

Atbilstoši doktora studiju programmas būtībai, nozīmīgākie mācību rezultāti doktorantūras līmenī ir kompetenču apguve patstāvīgas un inovatīvas pētnieciskās darbības veikšanai un akadēmiski profesionālās domāšanas attīstībai, kas tiešā veidā ir saistīts ar pētniecību, kā arī jaunu zināšanu radīšanu.

Minēto rezultātu sasniegšanai Latvijā ir nepieciešams doktorantiem nodrošināt padziļinātu un kvalitatīvu, konkurētspējīgas pētniecības sistēmas nodrošināšanu. Ņemot vērā Eiropas Savienības doktorantūras studiju programmas īstenoto mācību virzienu tendences, attiecīgajās studijās būtu jāiekļauj informācija par pētniecības metodēm, pētniecības ētiku un zinātnisko godīgumu digitālo jautājumu kontekstā.

Papildus jānorāda, ka digitalizācijas jautājumi Latvijā, piemēram, atvērtā pētniecība, datu pārvaldība nav attīstīta pietiekami labi un iegūst arvien lielāku lomu.

### **Secinājumi** **Conclusions**

Doktora studiju kvalitātes nozīme valstu ekonomiskajā attīstībā ir milzīga. Doktora studiju programmu potenciāls paver plašākas iespējas zinātnes attīstībai, vienlaikus arī nodrošina sarežģītu attiecību mehānisma nodrošināšanu starp sabiedrību un izglītības iestādēm, pētniecību kopumā. Neskatoties uz doktorantiem sniegtajām iespējām pētniecības procesā, studiju procesā, pastāv

zināma rakstura problēmas, kas saistītas ar digitalizācijas ienākšanu mūsdienu pētnieciskajā institūtā. Izglītības iestāžu, universitāšu atbildības līmenis attiecībā uz doktora studiju procesa nodrošināšanu aug, vienlaikus pieaug arī pieprasījums pēc tehnoloģiski attīstītākas bāzes izveidošanu izglītības iestāžu, universitāšu darbībā.

Strauji attīstoties tehnoloģijām, aktualizējas jautājums par digitālās jomas sakārtošanu doktorantūras ietvaros. Atvērtas pētniecības un datu pārvaldības, uzglabāšanas jautājumi kļūst par problēmjautājumu ne tikai Eiropas Savienības līmenī, bet arī pasaulē. Tādejādi, kā arī ņemot vērā pēdējos gados vērojamas tendences, nodrošinot doktora studiju programmas universitātēm arvien vairāk ir jāpievērš uzmanība iepriekšminēto jautājumu paspriešanai. No vienas puses digitalizācijas, kā izaicinājuma jautājumu problemātikai jābūt pētītai tādos studijuursos, kā piemērām, pētniecības metodes, publikāciju rakstīšana. No otras puses, šāda veida izmaiņas būtu jāpārdomā no minēto studiju kursu mērķu un uzdevumu skatupunkta. Apzvērama arī jaunu kursu ieviešana, lai sasniegtu Boloņas procesa ietvaros norādītus doktora studiju programmas virs mērķus, tādejādi precizējot doktora studiju programmas mērķus un uzdevumus atbilstoši inovatīvajām tendencēm attiecībā uz pētniecības sistēmu kopumā, kā arī doktorantu iesaisti starptautiskajos pētniecības projektos utt.

Pieaugot digitalizācijas nozīmei doktorantūras programmas ietvaros, pētniecībā kopumā tiek rādīts jauns globālas pētniecības virziens, kas arī būtu ietverams doktora studiju programmās.

### **Summary**

Doctoral studies are a system for preparation of scientific doctors, which essentially is oriented towards research and in-depth instruction on research methods. Doctoral thesis is developed and presented within the framework of doctoral studies. The developed work has to be original to the extent possible (English Oxford living Dictionary). Within the framework of doctoral studies the doctoral students are taught the research technology with the purpose of successfully resolving matters related to new scientific, technology and methodology challenges, and less attention is paid to the matters of originality and more – to the matters of innovations.

The doctoral students create new ideas and knowledge, which may serve as grounds for new innovations in the relevant research fields in the future. During the doctoral studies the doctoral students act as mediators for the exchange of their ideas among the higher education institutions and enterprises, which is understood as satisfaction of their needs in the field of research, as private sector demand for provision of theoretical base (Thune, 2009). Despite the main purpose of the doctoral process, there is a certain challenge in provision of such process from the perspective of digitalization.

Under the Bologna Process, doctoral studies are recognized as the third cycle of higher education. Essentially upon starting of the studies, in the process of doctoral studies the new Doctoral students are perceived as new researchers, who should be provided with the necessary and at the same time proportional rights. In accordance with the essence of the Bologna Process,

the European universities and the state authorities share responsibility of the consideration of the status and conditions of the doctoral students and the new researchers.

In the era of economic globalization and digitalization, increased international interaction is of great importance, which in turn points to the emergence of the global system and global processes in the education system, including in the field of doctoral studies.

Provision and exploration of new knowledge is becoming increasingly in demand, particularly in areas that today have become an integral part of progress. Interdisciplinary Artificial Intelligence, Space Law etc. are the areas that are currently being intensively researched, including by doctoral students as new researchers.

In general, a doctoral degree plays a crucial role in defining educational pathways and knowledge creation. Holders of doctoral degree are seen as a source of innovation and novelties, providing new opportunities and directions for research. This is one of the reasons why there is great worldwide support for the implementation of doctoral programs, while also addressing the shortcomings of existing education, which, by its very nature, leads to reform and innovation (Doctoral education – Taking Salzburg forward. Implementation and new challenges, 2016).

Digitalization challenges are attributed not only to the advantages, but also to the hindering factor of innovation research. As educational institutions play an important role in the implementation of the doctoral program, the problems related to digitalization have a direct impact on the work of institutions and their ability to ensure process of corresponding quality. The importance of digitalization is linked to the process of transforming data, namely into digital data that can be easily read and also processed by a computer (Definition of digitization noun, 2020). This process is closely linked to the use of big data in research and the issue of open studies. The students of the doctoral program, doctoral students, in their daily activities encounter rapid and active data exchange and information exchange in the Internet environment. Doctoral students use different types of information exchange potential to obtain the results of their research. Studies by the doctoral students and the research results are transferred from one recipient to the other over the Internet, and open directories, information storage systems are created, as well as the open access principle for publishing publications is widely used.

Despite the facilitation of the research process, for doctoral students the digitalization aspect places a greater burden on educational institutions. Institutions need to work on developing a coherent policy for research on digitalization, as well as addressing the issue of adapting the infrastructure to modern research methods. This would include not only technical problems, but also matters arising from legal and research ethical issues. (Hasgall & Saenen, 2019).

Institutional policies on, for example, the monitoring of open studies, with a clear policy development in the field, taking into account the digitalization dimension, would be one of the important issues. In order to ensure successful doctoral research during the digitalization period, it is necessary to pay close attention to interdisciplinary cooperation and cooperation between doctoral students and educational institutions. Ensuring dialogue between the parties would increase efficiency in innovative development of research policies. It should be noted that educational institutions are limited in controlling the research process of doctoral students, especially as regards the use of digital tools in research (Preez, 2018).

With the rapid development of technology, the question of structuring digitalization within the doctoral program is becoming more pressing. Open research and data management, storage issues are becoming a challenge not only at the EU level but globally as well. As a result, and in the light of trends of recent years, universities must increasingly focus on

addressing the above issues when providing doctoral programs. The problems of digitalization should be studied in detail in study courses such as research methods and writing of publications. With the increasing importance of digitalization in the doctoral program, a new direction of global research is demonstrated in the research field in general.

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# HIGHER EDUCATION IN THE REPUBLIC OF BULGARIA AT THE CROSSROAD - PROBLEMS AND MEASURES TO PREVENT THEM

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**Abstract.** *This report identifies some of the problems of higher education in the Republic of Bulgaria related to the demographic crisis in the transition process and measures to overcome them. Emphasis is placed on the legislative framework, the rating system, the financing of higher education institutions and the science in them, the quality of training, the demand for staff from business and the supply of staff from universities, the admission of students and the offered forms of training. The analysis made by the authors is based on summarized data, which has been officially published, on the actual state of higher education in Bulgaria. Measures are proposed to overcome the problems, some of which are based on experience at the Technical University of Gabrovo.*

**Keywords:** *higher education, education, measures, rating, strategy.*

## Introduction

Education is a kind of personality improvement tool and an indicator of the progress of society. It is one of the areas with constant priority objectives for modernization. The process of education and training is in the interest of man, society and the state, involving the preservation and transfer of knowledge to future generations (Stoyanova, 2008). A number of reforms have been made in the educational system of the Republic of Bulgaria, related to changes in the structure and organization of the educational process, degrees of education, financing, accreditation, etc.

The main goals to be achieved by 2010 are:

- adopting systems with easily understandable and comparable educational degrees (bachelor, master, doctor);
- introduction of a two-cycle training system;
- building a credit system;
- promoting mobility by overcoming obstacles to its implementation;
- promoting European quality assurance cooperation;

- promoting the European dimension in higher education.

All this was achieved with the help of reforms in the legislation: the Law on Higher Education (LHE), the Law on Development of the Academic Staff in the Republic of Bulgaria (LDASRB), regulations, regulations, decrees (Zakon za razvitiето na akademichniq sastav v Republika Balgaria, DV, № 38 ot 21.05.2010, № 81 ot 15.10.2010, № 101 ot 228.12.2010).

The purpose of the authors is to highlight the problems and find alternative solutions for higher education in Bulgaria, which is at a crossroads in the globalizing world. To achieve it, the following issues will be addressed: within the legislative framework of the country;

- the strategy for the development of higher education and statistics;
- a policy for the pre-emptive funding of certain scientific fields in order to meet the demand of certain business professionals;
- the demographic crisis in the country, which is a phenomenon throughout the European Union;
- providing quality education service to all citizens, regardless of gender, age, condition.

## **Exposure**

### ***1. Legislative framework - strategy and statistics***

A "Strategy for the Development of Higher Education in the Republic of Bulgaria" has been developed and adopted, which clearly defines and distinguishes the main problems in the system. On the one hand, there is a growing need for more and more skilled personnel, on the other hand is Industry 4.0 and the new professions or the so-called "Professions of the future". Another determining factor is the high rates of scientific and technological development, the competitiveness of trained staff and access to higher education for citizens (<http://old.government.bg/cgi-bin/ecms/vis>).

According to the "Strategy for the Development of Higher Education in the Republic of Bulgaria for the Period 2014-2020", the main problems are caused by the significant discrepancy between the structure and profile of graduates and the dynamics of the labor market in Bulgaria and the European Union (EU). They are reduced to (Petrova & Lazov, 2010):

- serious shortage of personnel in the field of engineering, natural sciences and pedagogical sciences;
- lagging behind in training in new professions needed for the green economy, high-tech and innovative activities;
- technological backlog in services and production;

- the mismatch between expected competences and actual knowledge and skills.

Many manufacturing companies are looking for engineers and they are ready to pay a starting engineer with 1300 BGN of work (an amount above the national average by the end of 2019). in this area. It is the employers' initiative to seek contacts with higher education institutions at meetings, conferences and other forums in order to obtain the necessary human resources they need. They participate in the development of curricula for the majors and the writing of curricula in different disciplines. Here, students in real-world environments fulfill their obligations regarding student internships, the development of diploma papers and projects.

Universities, in their turn, are looking for new, attractive and necessary specialties for business and candidate students. This is because the candidates are few and the places in the universities are many. Evidence in this direction is that in the 1999/2000 academic year, 41 universities and 47 colleges operated in Bulgaria. As of January 31, 2011, there are 50 accredited universities, academies, colleges, etc., and now there are 52 accredited by the Register of Higher Schools of the Ministry of Education and Science (MES), developed on the basis of Art of the Higher Education Act (HEA). As of September 2019, there are 207,000 Bulgarian students in Bulgaria and 14,000 foreign students from 115 countries. The share of foreigners in our universities is about 6%, according to EUROSTAT data. The largest is the proportion of students from Greece - 3 600 (26%), the UK - 2 000 (14%), Turkey - 1 400, Germany - 1 120, Ukraine - 700, etc. foreign doctoral students are 529, from Greece - 138, Turkey - 75, Kazakhstan - 50, etc. At the same time in Austria, which has a relatively the same population - 8.18 million people and the same number of students 241 thousand, there are 13 universities and 6 art colleges. An average of 12,700 students enrolls in an Austrian higher education institution, and about 6,000 in Bulgaria. One in every 200,000 people in Bulgaria falls in one higher education institution against 43,0000 in Austria. How is France? – 90 universities, 3 national institutes and 14 higher education institutions with more than 2 million student. In Spain - 43 public universities, 3 private and 4 Catholic with a total of 1.7 million students. Another major focus is the choice of major, and in the EU in 2018, almost one-third of the 19.6 million students have chosen to study: social sciences, administration and management, law. Of these, 11.9 million are enrolled in Bachelor's Degree Programs, and 7.7 million students upgrade to Master's Degree Programs.

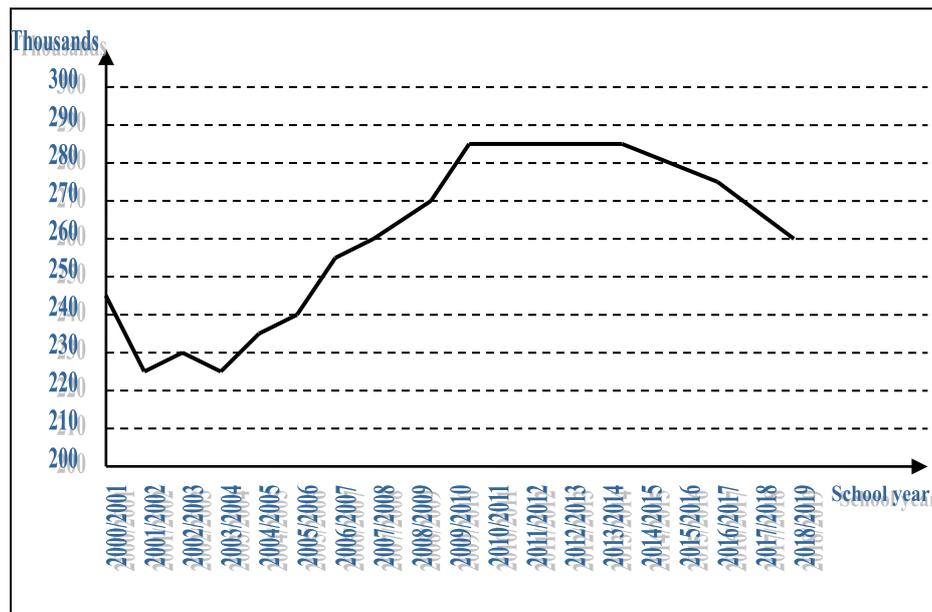


Figure 1 Students trained in program: a "Professional Bachelor", "Bachelor" and "Master" for the period 2000-2019

Brussels experts advise the Bulgarian government and the Ministry of Education and Science (MES) respectively to reform the system and reduce the number of institutions of higher education to 10 because European practice is 1 million per capita to have one university. The MES policy, in turn, does not support the decision to close universities, but rather to profile in technical, humanities, natural sciences, the arts, etc., to unite and unite in European education networks.

**2. A policy for the pre-emptive funding of certain scientific fields in order to meet the demand of certain business professionals**

The policy of the state is, with the help of the developed and effective seven year rating system, to finance with state subsidy the pre-eminent scientific branches and universities in the top places in the ranking with a higher state subsidy (Kartunov, 2015). It is worth mentioning here that the Technical University is ranked 2<sup>nd</sup> in Mechanical Engineering, 3<sup>rd</sup> in General Engineering and 5<sup>th</sup> in Communication and Computer Engineering in this Ranking System and this is reflected in allotted state procurement by the directions and the corresponding financing from the state budget. For example, for 2019 at the Technical University of Gabrovo the subsidy was increased by nearly BGN 600,000 and increased by an average of 10% of the admission plan in these areas, projects in these fields of science were validated (Competence Center BG05M2OP001-1.002-0023 "Intelligent Mechatronic, Eco and Energy Saving Systems and Technologies" with budget 23,569,719 BGN, Center of Excellence BG05M2OP001-1.001-0008 "National Center for Mechatronics and Clean

Technologies” with budget 69,184,530 BGN, Competence Center BG05M2OP001- 1.002-0006 "Quantum Communication, Intelligent Security and Risk Management (QUASAR)" with budget 13,500,000 BGN, Competence Center BG05M2OP001-1.002-0002 "Digitization of the economy in a Big Data environment" with budget 13,333,869 BGN).

The share of university graduates (aged 30-34) reached 32.1% in 2015, which means that Bulgaria is on track to reach the national target of the Europe 2020 strategy of 36%. There is a significant gender gap in higher education: the percentage of women is about 15 percentage points higher than that of men.

The employment rate of recent graduates has increased significantly, to 87.1% in 2018, and now exceeds the EU average of 81.9%. This is due to the improvement of labor market prospects. In 2015, 2016, 2017, 2018 and 2019, economics and administration and administration studied the highest share among university graduates - 29.7%, followed by social and behavioral sciences (13.7%), engineering and engineering professions (10.7%), pedagogy and education (8.12%) and healthcare (6.81%). Computer science graduates (3.18%), life sciences (0.83%), mathematics and statistics (0.16%) have the lowest shares. The share of higher education graduates in the social sciences, business and law is one of the highest in the EU, but with a downward trend. The share of higher education graduates in science, mathematics and informatics, as well as in health and well-being is one of the lowest in the EU, but is increasing.

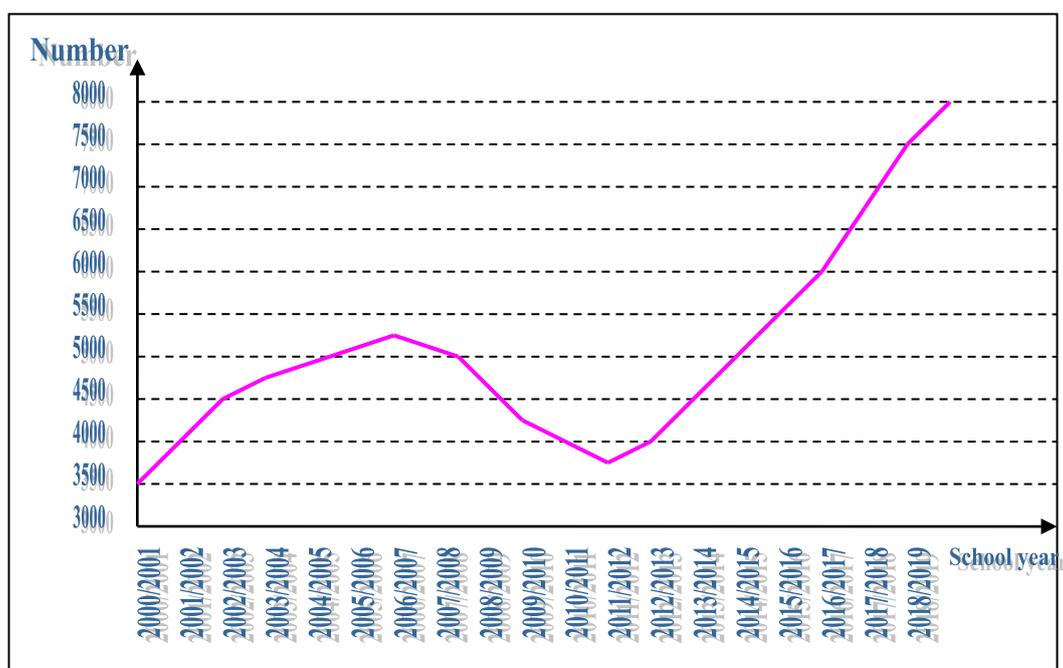


Figure 2 Students learning in educational and scientific degree "Doctor"

Regarding the third degree of Doctor, there is an increase until 2007, followed by a decline until 2011 and after the reform in higher education with the entry into force after the promulgation of the Law on Development of the Academic Staff in the Republic of Bulgaria (LDASRB) growth. This increase in the number of Ph.D.s is due to the new law giving universities the opportunity to educate researchers, to be able to award doctoral degrees in the field, as well as to be able to appoint associate professors and professors". As of 2018, a system has been developed at the National Center for Information and Documentation with a Register of Academic Staff and the Defended Dissertation. As of January 2020, 4731 persons are registered in it, corresponding to the relevant scientific and metric indicators divided by names, organizations, professional field, scientific degree, date of appointment, date of diploma, etc., with 25 registered for the Technical University of Gabrovo.

The Higher Education Development Strategy 2014-2020 also outlines a number of key challenges, such as:

- insufficient funding;
- insufficient applicability of education in the labor market;
- insufficient links between training and research;
- difficulties in recruiting teachers and in their professional development;
- insufficient opportunities for lifelong learning;
- difficult access to higher education for vulnerable groups.

Challenges regarding the low applicability of the labor market are related to the mismatch between the skills of the graduates and the needs of the labor market, the lack of personnel in engineering and pedagogical sciences, the limited link between the curricula and the labor market, the need for more hands-on training and a lack of vocational guidance.

There are also challenges regarding the quality of Bulgarian higher education and its compatibility with the European higher education system, due to teaching methods lagging behind new trends, poor scientific performance in some areas, complex and inefficient accreditation procedures and evaluation of universities, as well as insufficient outgoing and poor inbound student mobility.

To address these challenges, the Higher Education Strategy proposes a series of measures within seven objectives:

- improving access to higher education and increasing the number of graduates of higher education;
- improving the quality of higher education;
- creating a sustainable and effective link between higher education institutions and the labor market;
- promoting research;

- modernization of the management system and a clear definition of higher education institutions;
- increasing funding for higher education and science;
- overcoming the negative tendencies in the professional development of teachers in higher education and creating incentives for them.

In line with the Strategy, Bulgaria introduced a results-based model of financing higher education institutions, with the results shown in Figs. 1, 2 and 3. In 2014, 14.6% of the state funding for public schools was allocated on the basis of criteria designed to assess the quality and applicability of education in the labor market. This share has increased to 30% for the academic year 2016/2017, reaching 60% in 2019/2020. Government funding is no longer predominantly based on the number of students enrolled in a specialty, but is determined on the basis of specific criteria for quality of training and compliance with labor market needs, accreditation and research evaluation of universities and employment suitability data of higher education graduates. In view of socio-economic priorities, 32 majors have been identified as 'priority areas' and 12 other areas have been considered 'protected' (ie important but not attractive to applicants). The list of priority areas includes mathematics, engineering, biotechnology, chemistry, energy, food technology, computer science, computer science and technology. Finally, the identified protected majors are predominantly in the field of philology (Korean Studies, Greek Philosophy, and Japanese Studies).

### ***3. Demographic crisis in the country, which is a phenomenon throughout the European Union***

Europe's population is aging. In six EU Member States, the age group between 5 and 18 years will shrink by at least 20% by 2040. The other six Member States face a shrinking age range of between 10% and 20%. At the same time, asylum applications submitted to the EU for the first time have tripled since 2013, with more than 80% of asylum seekers in 2015 under the age of 34. In 2017, as the flow of migrants into the EU increases, the number of candidate students increases. Europe's population is changing, and employment is also changing. Living and working in a technologically advanced and globalized economy requires people to acquire higher qualifications, knowledge and skills. A higher level of education is associated with a higher level of basic skills and responds to higher levels of employment. Recent graduates have an employment rate of 81.9% in 2015, which is 11.1 percentage points more than holders of diplomas for upper secondary education or vocational training after high school. Therefore, improving skills, in particular for low-skilled groups and disadvantaged groups, is one of the main objectives of the New Skills Program. The MES now turns its policy to dual education, to promoting the opening of vocational schools in secondary education and in higher education. Policy mea-

asures aimed at increasing the potential of education are a response to societal challenges and are implemented mainly in primary and secondary education (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:BG:PDF>).

At higher education level, the percentage of graduates increased significantly in the EU in 2016, at 38.7%. The EU has reached its target of 40% of university graduates in the population aged 30-34 by 2020. The level of qualification still varies between women and men, between births in the country and births abroad, and between regions and countries.

Higher education, as well as secondary education and post-secondary vocational programs, play a special role in preparing people for the labor market. In 2015, recent VET graduates had an employment rate of 73%, and the employment rate of recent high school graduates was 61.2% (Boeva, 2013).

Higher education has great potential to promote upward social mobility and to improve employment prospects. Policy measures to increase innovation and the applicability of higher education include personalized career guidance, follow-up of graduates, and work-based learning. Tracking the professional attainment of graduates is a practice in higher education institutions (Kartunov & Petrova, 2009).

The rating system and policies in the sector are changing the behavior and strategies for the development of higher education institutions in the Republic of Bulgaria. With its first release, the rating system (2010) provides a reliable assessment and tool for differentiating financing. Since 2015, based on the information from the rating system with certain indicators, the admission into public universities is restructured. From the position in the Rating system comes the assessment, which includes indicators for educational, scientific activity and achievement of graduates. Changes in admission are aimed at admission of students in the priority vocational fields, for which there is an expected shortage in the labor market, and to higher education institutions with higher marks for quality and realization. Respectively, the funding is reduced and accepted in the professional fields, which have a higher share of the irrational demand for higher education and which have a lower rating. In the last 2 years (2016 and 2017), enrollment in public higher education institutions has been reduced by over 12,000 units annually. This reduction concerns in particular the destinations: "Economics" and "Administration and Management".

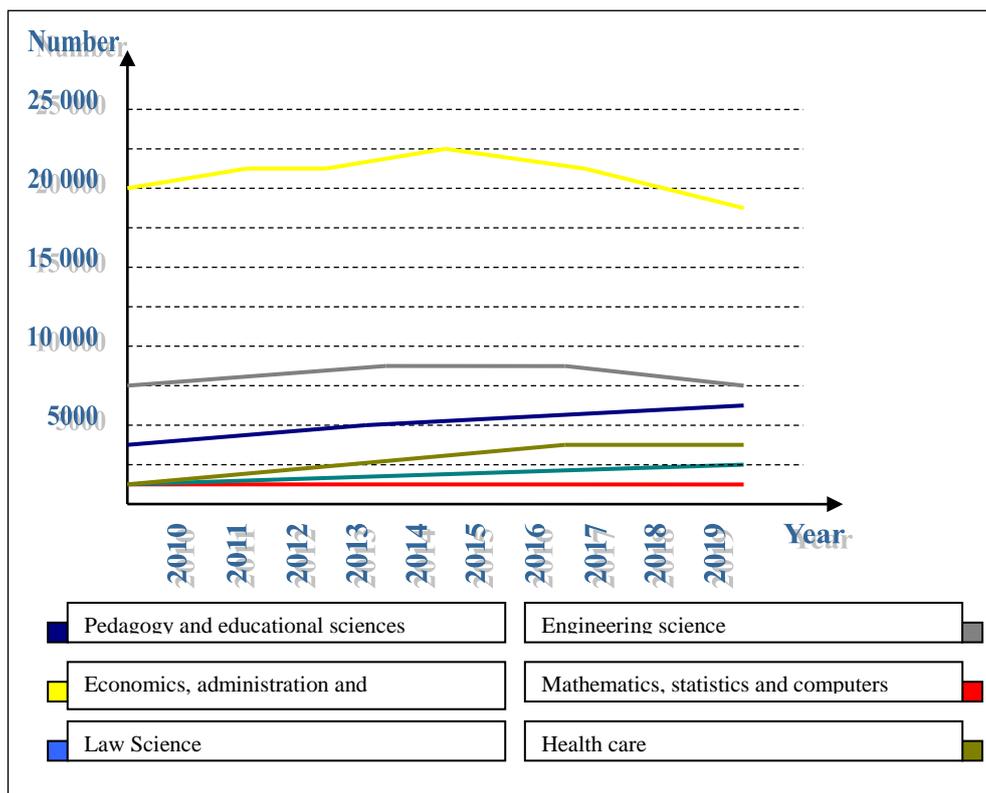


Figure 3 Number of university graduates by main areas (all levels of higher education), according to the National Statistical Institute, 2019

There is an irrational demand for higher education in these two areas of science. It is important to note that the professional fields are divided into 4 groups:

1<sup>st</sup> The most demanding occupational fields relevant to particular public sectors (mathematics, chemical sciences and physical sciences);

2<sup>nd</sup> Other priority professional areas;

3<sup>rd</sup> Directions for which there is no lack of demand on the part of the applicant students;

4<sup>th</sup> "Economics" and "Administration and Management", in which the reduction of admissions will continue even in the highly rated higher schools.

Let's look at the facts at the Faculty of Economics of the Technical University - Gabrovo presented in Table. 1 below:

Table 1 Admission Plan by Year at TU - Gabrovo, Faculty of Economics

Professional Field / Specialties	Coefficient	Capacity (Regular training /Distance learning)	Students accepted 2017/2018 (Regular training /Distance learning)	Students accepted 2018/2019 (Regular training /Distance learning)	Students accepted 2019/2020 (Regular training /Distance learning)	Plan reception 2020/2021 (Regular training /Distance learning)
<b>„Bachelor”</b>						
3.4 Social activities	1,05	120/60	20/5	19/1	20/9	20/10
3.7 Administration and Management	0,75	550	40/0	26/38	20/29	20/20
3.8 Economics	0,65	220	15/7	0/0	0/0	0/0
5.13 General engineering	1,20	800				
Industrial Management			20/20	20/20	26/19	25/20
<b>„Master”</b>						
3.4 Social activities	1,05	40	0/13	0/9	0/10	0/12
3.7 Administration and Management	0,75	200	4/50	0/67	0/58	0/60
3.8 Economics	0,65	0/0	0/0	0/0	0/0	0/0
5.13 General engineering	1,20	340				
Industrial Management			12/0	12/16	14/6	16/8

Table 1 presents "Proposal for admission plan for students by years of Technical University - Gabrovo, Faculty - Business" for which the state provides funds for their tuition support in the professional directions of the Faculty of Business for the academic year 2018/2019, 2019/2020 and 2020/2021. This proposal was made after implementation of Decree No. 64 of 25 March 2016, which is restrictive. The vocational fields in which admission has been reduced over the last 3 years will decrease and will decrease in the following years, but the number of students enrolled in them may not be below 15, according to the Ministry of Education and Science. If this happens, the Ministry of Education and Science will suspend the approval of state-funded admission (this is also evident from Table 1 for section 3.8 "Economics" of TU - Gabrovo). This phenomenon is observed mainly in professional fields, which are not inherent in the traditional profile of higher education. These are

"Economics", "Administration and Management", "Social Activities", created in the last 2 decades. Analyzing the data in Table 1, we can say that: for the academic year 2018/2019, 2019/2020, 2020/2021 there will be admission in the fields 3.4 "Social activities", 3.7 "Administration and management" and 5.13 "General engineering"; and for 2021/2022 5.13 General Engineering State Reception.

In the areas of the first group (Mathematics, Chemical and Physical Sciences, Energy) we have the most undeserved low demand. This is evident from the rating system - a small or very low number of students, on the one hand, and very good conversion rates, including high income of graduates, on the other.

As a general conclusion from the editions of the rating system we can say that the students with the highest professional degrees (informatics and computer science, mathematics, medical professional fields, a number of technical professional fields) have the highest incomes and the highest achievement rates. It can be expected that these will also be the professional areas with the highest future income growth.

One of the most significant challenges in the system of pre-school and school education is to provide pedagogical specialists in the long term, because after 5 years there will be a shortage of 40 thousand educators.

In accordance with the National Strategy for the Development of Research adopted by the National Assembly of the Republic of Bulgaria, budget expenditures for science in 2018, 2019 and 2020 have been increased with additional financial resources of BGN 15 million for each year. This appropriation is directed to public return activities for research related to significant public or sectoral tasks.

The Ministry of Education and Science offers free education in priority majors, introducing free training in them to reduce staff shortages. The aim is to stimulate interest in the specialties that will be most needed in the labor market in the future and in new professions.

The tuition fees for students in the fields of pedagogy, mathematics, chemical sciences, physical sciences, religion, materials and materials science from the academic year have been completely dropped from 2018/2019. At the same time, state funding may be suspended for 15 non-priority majors, including Economics, Administration and Management. This also applies to destinations that do not fit into the profile of a university. In all Higher education institutions in the Republic of Bulgaria, where there is no approved state admission, students may be trained in these non-priority majors but in paid admission. The branches of universities in poor regions of the country are additionally funded, such as: Vratsa, Vidin, Smolyan and Kardzhali - in order to preserve higher education there and not depopulate the region.

The statistics clearly show that no higher education institution in Bulgaria was able to complete its admission in the 2017/2018, 2018/2019 and 2019/2020 academic years. There is a tendency for the total number of places to be announced at universities to be higher than the number of students leaving school.

#### ***4. Some decisions about the lack of sufficient candidate students***

About 23,000 locations across the country remain vacant. The vacancies at the Sofia University "St. Kliment Ohridski" are 1500, and the pre-planned ones are close to 7000. The record is at the University of Economics in Varna, where nearly 2000 student places have remained unfulfilled - almost half of the plans. At the Technical University of Gabrovo, the situation is the following: an approved admission of 719 and an admission of 739 students. Here is a place to note the new forms of training:

- External training (at the place of work - ABB Sevlievo, Ideal Standard - Sevlievo, Arkus - Lyaskovets);
- Special regime (when a full-time student starts working on a basic employment contract, he / she completes a package of documents and can attend extramural studies with students and take their exams with the full-time students);
- Facilitated regime (when the student has changed status, such as pregnancy, young children, etc., then the classes are with the extras and the exams are with the regular training);
- Individual mode (when the student wants to graduate early but must have successfully completed the second year and with very good success 4.50, two years for one are taken).

### **Conclusion**

The following major conclusions can be drawn:

- funding schemes are being improved to increase population participation in the higher education system;
- increase efficiency and optimize the use of resources;
- progressively increasing the number of students, which creates the risk of deterioration of the quality of education, which in turn necessitates the establishment of quality control and assessment systems, systems for the success and efficiency of the educational process;
- increasing the level of correspondence between education and the needs of the labor market is achieved through closer cooperation between educational institutions, employers and scientific institutions;
- improving financial security by raising education and training costs;

- the accreditation system is being improved;
- the costs are linked to the quality of education and the results achieved;
- new forms of training are sought and
- digitalization in the educational process.

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# LATVIJAS UNIVERSITĀTES PEDAGOĢIJAS SPECIALITĀŠU STUDENTU ATTIEKSME PRET CIVILĀS AIZSARDZĪBAS STUDIJU KURSU

## *The Attitude of the Pedagogical Specialities' Students of the University of Latvia to the Study Course of Civil Defence*

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**Abstract.** *In Latvia the Civil Defence course is a compulsory course for all higher education study programs. The aim of the study was to find out the attitude of the students of pedagogy specialties of the University of Latvia towards the Civil Defence course, to study the students' self-assessment of understanding the most important topics of the Civil Defence course and the most important insights learned by students during acquiring the Civil Defence course. To find out the attitude of the pedagogical specialties students towards the Civil Defence course, a questionnaire of the first-year students was carried out after the acquisition of the course. The responses of full-time and part-time students were compared. The results of the questionnaire showed that the majority of the surveyed students have understood the importance of the Civil Defence course and they consider that this course is necessary for all study programs. After completing the course, most students have understood the most important topics of the Civil Defence course. The majority of surveyed students consider that topics related to national defence should be included in the Civil Defence course. As the most interesting topics students have found first aid, disasters and their classification and disaster management. Students believe that Civil Defence knowledge is needed for being aware of how to deal with emergencies, if necessary, to be able to provide first aid and for better understanding of the functioning of the civil defence system in Latvia. Students see an opportunity to combine the acquiring of Civil Defence course with the mastering of another study course.*

**Keywords:** *civil defence, full-time students, national defence, part-time students, study course.*

### **Ievads**

#### **Introduction**

Civilā aizsardzība ir tādu organizatorisku, inženiertehnisku, ekonomisku, finansiālu, sociālu, izglītojošu un zinātnisku pasākumu kopums, kurus īsteno valsts un pašvaldību institūcijas un sabiedrība, lai nodrošinātu cilvēku, vides un īpašuma drošību, kā arī īstenotu atbilstošu rīcību katastrofas un katastrofas draudu

gadījumā (Civilās aizsardzības un katastrofas pārvaldīšanas likums (CAKPL) turpmāk tekstā - , 2016). Civilā aizsardzība ir ļoti cieši saistīta ar iedzīvotāju drošības nodrošināšanu (Matisāne, 2011). Saskaņā ar Civilās aizsardzības un katastrofu pārvaldīšanas likumu izglītības iestāžu pienākums ir nodrošināt obligātā civilās aizsardzības kursa pasniegšanu izglītojamajiem augstākajā, vispārējā un profesionālajā izglītībā (CAKPL, 2016).

2017. gada 20. decembrī stājās spēkā Ministru kabineta noteikumi, kuri paredz augstākā līmeņa studiju mācību procesā ieviest Civilās aizsardzības kursu (Ministru kabineta noteikumi Nr. 716, 2017). Šie noteikumi ir saistoši visām Latvijas augstākās izglītības iestādēm. Lai gan vairumam studentu šāds kurss jau ir studiju saturā, viedokļi par tā nepieciešamību dalās (Segliņš, 2018). Civilās aizsardzības kursa ieviešana augstskolās jauniešiem sniegs informāciju, kas vajadzīga, lai jaunieši droši un pārliecinoši spētu izdzīvot arī neordinārās situācijās. Latvijas Universitātes prorektors eksakto, dzīvības un medicīnas zinātņu jomā Valdis Segliņš (Segliņš, 2018) uzskata, ka ir daļa kursu, kur nevar paļauties uz to, ka jaunieši paši apgūst nepieciešamās zināšanas, un viena no tām ir civilā aizsardzība. Tas ir iemesls, kādēļ pieņemts, ka šis augstskolas mācību priekšmets jāievieš kā obligāts. Līdzīgi kursi veiksmīgi tiek īstenoti arī citās Eiropas Savienības valstīs, piemēram, Lielbritānijā, Vācijā un Francijā. Valstī ir likumā noteikta struktūra, kā rīkoties konkrētā krīzes situācijā. Ļoti svarīgi ir laikus atpazīt kritisku situāciju un izprast nākamās rīcības soļus (Segliņš, 2018).

Pētījumi par civilās aizsardzības mācīšanu liecina, ka apgūstot kursu ļoti svarīgi ir praktiski gūto pieredzi saskaņot ar teorētiskajām zināšanām, uzlabojot studentu spēju izprast un orientēties dažādās sarežģītās ārkārtējās situācijās (Menoni, 2006). Zināšanas par katastrofām un katastrofu pārvaldīšanu dod iespēju iedzīvotājiem mērķtiecīgāk rīkoties katastrofu gadījumos (Hong, Lee, & Kim, 2019). Pētījumi liecina, ka zināšanas par katastrofu pārvaldīšanu samazina katastrofu izraisītās negatīvās sekas (Kruger, Hinton, Sinclair, & Silverman, 2018). Svarīga nozīme ir arī iedzīvotāju prasmei sniegt pirmo palīdzību ārkārtējās situācijās (Pawłowski, Lasota, Goniewicz, & Goniewicz, 2018).

Civilās aizsardzības kursā iespējams iesaistīt arī tēmas par valsts aizsardzību. Igaunijas zinātnieki ir noskaidrojuši, ka jaunieši, kuri skolā ir apguvuši nacionālās aizsardzības kursu, ir daudz motivētāki nepieciešamības gadījumā aizsargāt valsti nekā jaunieši, kuri šādu kursu nav apguvuši (Mänd & Järvet, 2013). Tas liek domāt, ka apgūstot Civilās aizsardzības kursu, tajā būtu vērtīgi iekļaut arī tēmas par valsts aizsardzību.

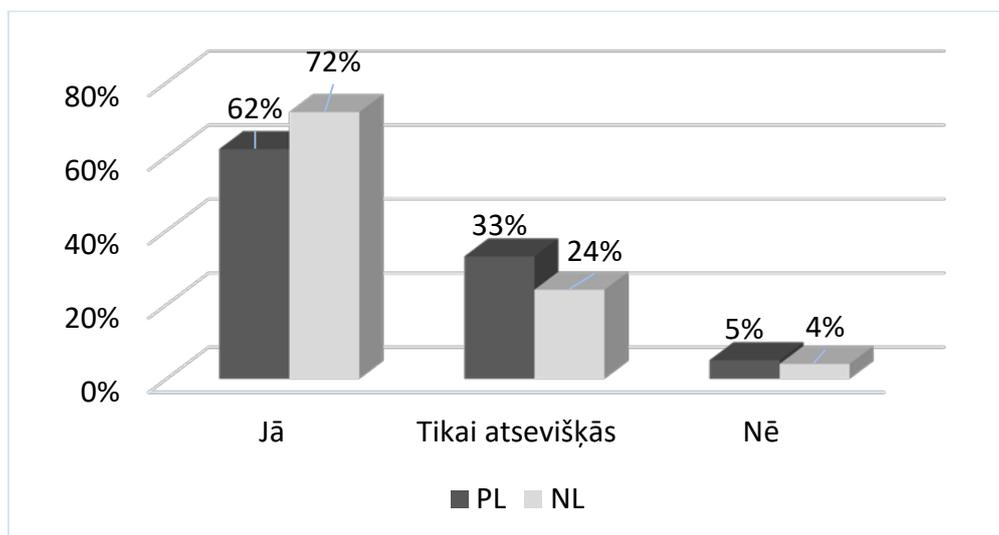
Pētījuma mērķis bija noskaidrot Latvijas Universitātes pedagogijas specialitāšu studentu attieksmi pret Civilās aizsardzības kursu, izpētīt studentu pašnovērtējumu par svarīgāko Civilās aizsardzības kursa tēmu izpratni un svarīgākās studentu gūtās atziņas, apgūstot Civilās aizsardzības kursu.

## Metodika Methodology

Pētījumā tika veikta Latvijas Universitātes pedagogijas specialitāšu pilna laika (PL) un nepilna laika (NL) studentu anketēšana. Anketēšana tika veikta pēc Civilās aizsardzības kursa apgūšanas. Ar anketēšanas palīdzību tika noskaidrota studentu attieksme pret Civilās aizsardzības kursa ieviešanu visās studiju programmās, tika veikts studentu pašnovērtējums par svarīgāko Civilās aizsardzības kursa tēmu izpratni, noskaidrots studentu viedoklis par interesantākajām Civilās aizsardzības kursa tēmām, noskaidrots studentu viedoklis par nepieciešamību Civilās aizsardzības kursā iekļaut tēmas par valsts aizsardzību, izpētītas svarīgākās studentu gūtās atziņas, apgūstot Civilās aizsardzības kursu, noskaidrots studentu viedoklis par studiju kursu, ar kuru varētu saistīt Civilās aizsardzības kursa apguvi. Pavisam tika aptaujāti 174 respondenti: 86 PL studenti un 88 NL studenti. Tika salīdzinātas PL un NL studentu atbildes.

## Rezultāti Results

Pētījuma rezultāti parādīja, ka lielākā daļa aptaujāto studentu uzskata, ka Civilajai aizsardzībai ir jābūt obligātam studiju kursam visās studiju programmās (skat. 1. att.).



1.attēls. *Studentu viedoklis par Civilās aizsardzības kursa nepieciešamību visās studiju programmās (% no respondentu skaita grupās)*

Figure 1 *Students views on the necessity of Civil defence course in all study programmes (in % from the number of respondents in groups)*

62% aptaujāto PL studentu un 72% aptaujāto NL studentu atzīmē, ka civilās aizsardzības kursam ir jābūt obligātam visās studiju programmās, 33% PL studentu un 24% NL studentu uzskata, ka Civilajai aizsardzībai ir jābūt obligātam kursam tikai atsevišķās studiju programmās, bet tikai 5% PL studentu un 4% NL studentu uzskata, ka Civilajai aizsardzībai nav jābūt obligātam studiju kursam. Iegūtie rezultāti parāda, ka vairums aptaujāto studentu izprot Civilās aizsardzības kursa nozīmīgumu.

Lielākā daļa aptaujāto pedagogijas specialitāšu studentu ir izpratuši visas svarīgākās Civilās aizsardzības kursa tēmas (skat. 1. tab.). 85% PL studentu un 82% NL studentu ir pilnībā izpratuši civilās aizsardzības sistēmu Latvijā, bet 15% PL studentu un 18% NL studentu to ir daļēji izpratuši. 88% PL studentu un 87% NL studentu ir atzīmējuši, ka ir pilnībā izpratuši tēmu par katastrofām un to iedalījumu, 89% PL studentu un 83% NL studentu ir atzīmējuši, ka ir pilnībā izpratuši tēmu par katastrofu pārvaldīšanu, bet 91% PL students un 92% NL studentu ir pilnībā izpratuši tēmu par pirmās palīdzības sniegšanu nelaiemes gadījumos. Salīdzinoši lielāks skaits studentu atzīmē, ka tikai daļēji ir izpratuši tādas tēmas kā valsts materiālās rezerves (19% PL un 30% NL studentu ir daļēji izpratuši šo tēmu) un civilās aizsardzības aizsargbūves (19% PL un 31% NL studentu ir daļēji izpratuši šo tēmu). Atsevišķi studenti uzskata, ka šīs tēmas nav izpratuši (1% PL studentu un 1% NL studentu nav izpratuši tēmu par valsts materiālajām rezervēm). PL studenti, salīdzinājumā ar NL studentiem ir labāk izpratuši tēmas par valsts materiālajām rezervēm un civilās aizsardzības aizsargbūvēm. Tas var būt saistīts ar to, ka PL studentiem apgūstot Civilās aizsardzības kursu ir vairāk kontaktstundu un katru tēmu var sīkāk izskaidrot un vairāk laika veltīt zināšanu nostiprināšanai. Kopumā anketēšanas rezultāti parāda, ka studenti ir labi izpratuši dažādas Civilā aizsardzības kursa tēmas, pie kam PL laika studentu pašnovērtējums par tēmu izpratni ir nedaudz augstāks nekā NL studentiem.

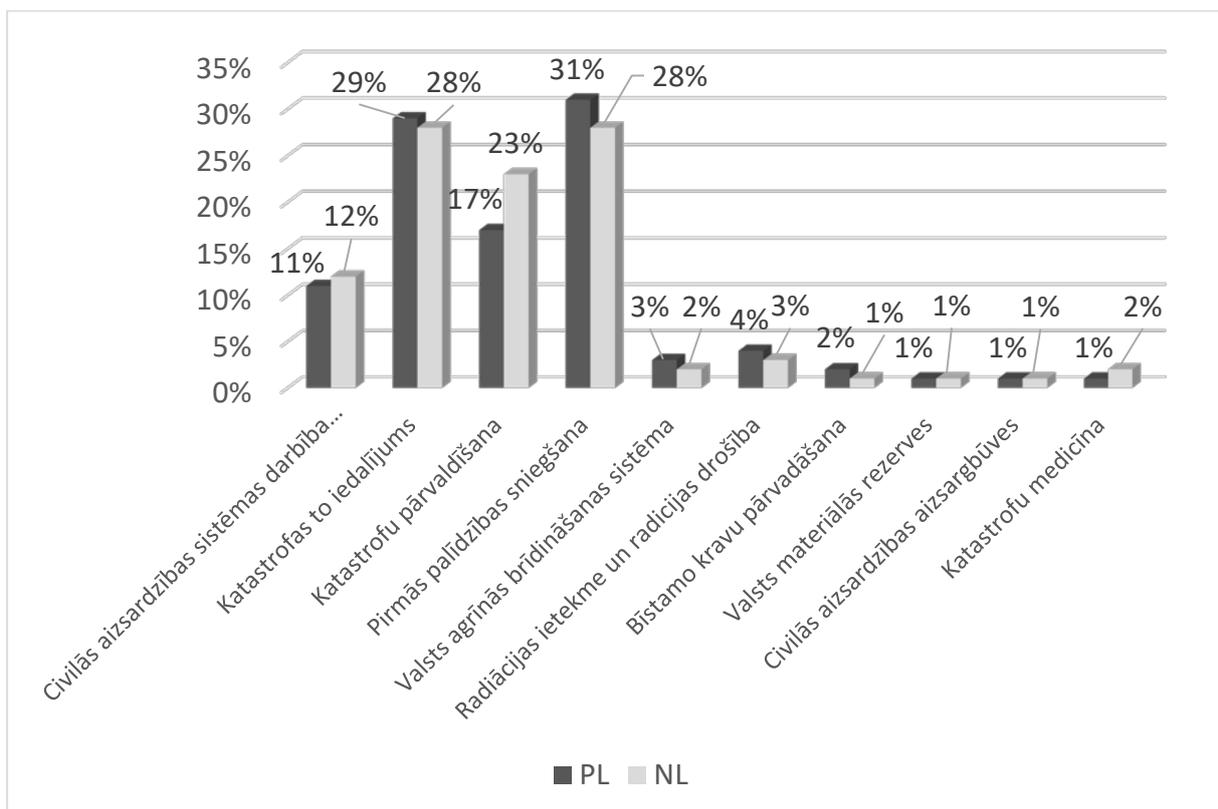
*1.tabula. Studentu pašnovērtējums par svarīgāko Civilās aizsardzības kursa tēmu izpratni (% no respondentu skaita grupās)*

*Table 1 Students' self-assessment on the understanding of the most important topics of the Civil Defence course (in % from the number of respondents in groups)*

Tēmas	PL			NL		
	Jā	Daļēji	Nē	Jā	Daļēji	Nē
Civilās aizsardzības sistēmas darbība Latvijā	85	15	0	82	18	0
Katastrofas to iedalījums	88	12	0	87	13	0
Katastrofu pārvaldīšana	89	10	1	83	16	1
Pirmās palīdzības sniegšana	91	9	0	92	8	0
Valsts agrīnās brīdināšanas sistēma	85	14	1	79	19	2

Radiācijas ietekme uz organismu un radiācijas drošība	81	19	0	73	27	0
Bīstamo kravu pārvadāšana	79	20	1	78	21	1
Valsts materiālās rezerves	80	19	1	69	30	1
Civilās aizsardzības aizsargbūves	81	19	0	67	31	2
Katastrofu medicīna	77	23	0	69	31	0

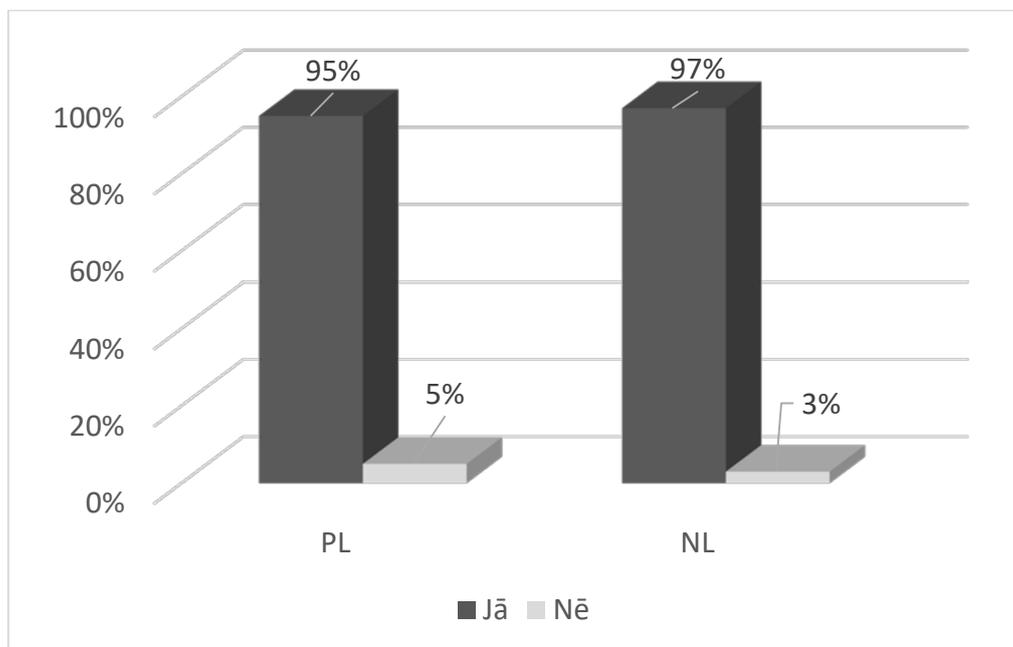
Lielākā daļa aptaujāto studentu par interesantākajām Civilās aizsardzības kursa tēmām uzskata Pirmās palīdzības sniegšanu (31% PL studentu un 28% NL studentu to ir atzīmējuši par interesantāko tēmu) un tēmu: Katastrofas, to iedalījums (29% PL studentu un 28% NL studentu to ir atzīmējuši par interesantāko tēmu) (skat. 2. att.). Salīdzinoši liels skaits studentu par interesantākajām tēmām ir atzīmējuši arī katastrofu pārvaldīšanu (17% PL studentu un 23% NL studentu to ir atzīmējuši par interesantāko tēmu) un civilās aizsardzības sistēmas darbību Latvijā (11% PL studentu un 12% NL studentu to ir atzīmējuši par interesantāko tēmu). Pārējās tēmas mazāks skaits aptaujāto studentu ir uzskatījuši par interesantākajām Civilās aizsardzības kursa tēmām.



2.attēls. Studentu viedoklis par interesantākajām Civilās aizsardzības kursa tēmām (% no respondentu skaita grupās)

Figure 2 Students views on the most interesting topics of the Civil defence course (in % from the number of respondents in groups)

Lielākā daļa aptaujāto studentu uzskata, ka Civilās aizsardzības kursā nepieciešams iekļaut arī tēmas par valsts aizsardzību (5% PL studentu un 97% NL studentu atbalsta šo viedokli un tikai 5% PL studentu un 3% NL studentu tam nepiekrīt) (skat. 3. att.).



3.attēls. *Studentu viedoklis par nepieciešamību Civilās aizsardzības kursā iekļaut tēmas par valsts aizsardzību (% no respondentu skaita grupās)*

Figure 3 *Students' opinion on the necessity to include topics on national defence in the Civil Defence course (in % from the number of respondents in groups)*

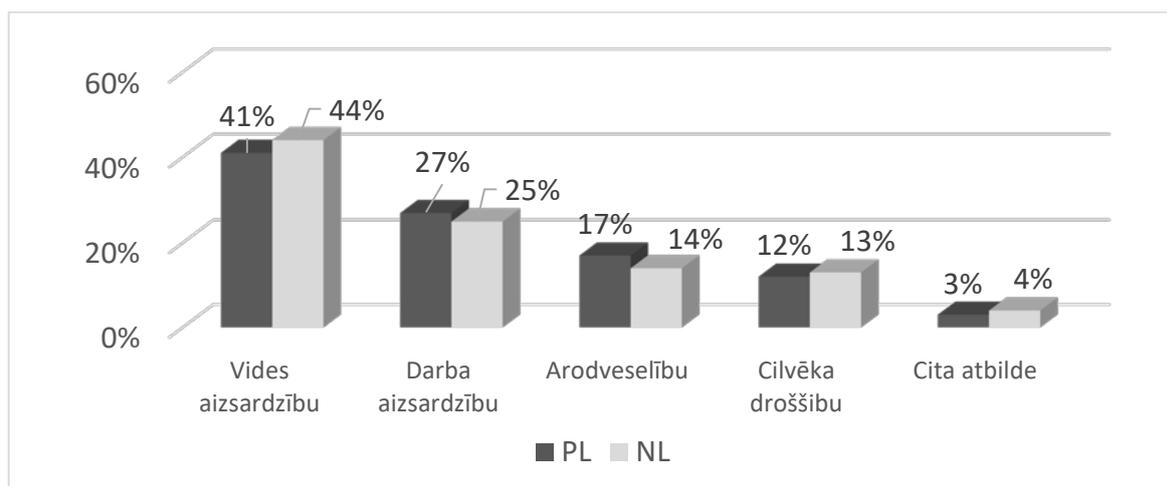
Anketēšanas rezultāti parādīja, ka studentu gūtās svarīgākās atziņas, apgūstot Civilās aizsardzības kursu, ir gatavība rīcībai dažādās ārkārtas situācijās un gatavība sniegt pirmo palīdzību nelaiemes gadījumos (skat. 2. tab.). Kā svarīgāko atziņu apgūstot Civilās aizsardzības kursu būt gatavam rīkoties dažādās ārkārtas situācijās ir atzīmējuši 29% PL studentu un 31% NL studentu, bet būt gatavam sniegt pirmo palīdzību nelaiemes gadījumos 26% PL studentu un 31% NL studentu. Par svarīgākām atziņām apgūstot Civilās aizsardzības kursu studenti ir atzīmējuši arī izpratni par civilās aizsardzības sistēmas darbību Latvijā (9% PL studentu un 8% NL studentu), izpratni par valsts iestāžu un amatpersonu pienākumiem civilajā aizsardzībā (7% PL studentu un 4% NL studentu), izpratni par iedzīvotāju tiesībām un pienākumiem civilajā aizsardzībā (6% PL studentu un 5% NL studentu), izpratni par katastrofu pārvaldīšanu (6% PL studentu un 7% NL studentu), izpratni par iespējamām katastrofām un to sekām (4% PL studentu un 4% NL studentu) un citas atziņas.

2.tabula. *Studentu gūtās svarīgākās atziņas, apgūstot Civilās aizsardzības kursu (% no respondentu skaita grupās)*

Table 2 *The most important insights learned by students during acquiring the Civil Defence course (in % from the number of respondents in groups)*

Svarīgākā atziņa	PL studenti	NL studenti
Būt gatavam rīcībai dažādās ārkārtas situācijās	29	31
Būt gatavam sniegt pirmo palīdzību nelaimes gadījumos	26	31
Izpratne par civilās aizsardzības sistēmas darbību Latvijā	9	8
Izpratne par valsts iestāžu un amatpersonu pienākumiem civilajā aizsardzībā	7	4
Izpratne par iedzīvotāju tiesībām un pienākumiem civilajā aizsardzībā	6	5
Izpratne par katastrofu pārvaldīšanu	6	7
Izpratne par iespējamām katastrofām un to sekām	4	4
Izpratne par preventīvo pasākumu nepieciešamību katastrofu riska mazināšanai	3	2
Izpratne par civilās aizsardzības lomu katastrofu pārvaldīšanā	3	3
Izpratne par valsts agrīnās brīdināšanas sistēmas darbību	2	1
Citas atziņas	5	4

Anketēšanas rezultāti parādīja, ka studenti saskata iespējas saistīt Civilās aizsardzības kursa apguvi ar kāda cita studiju kursa apguvi. Lielākais aptaujāto studentu skaits saskata iespēju saistīt Civilās aizsardzības kursa apguvi ar Vides aizsardzības kursa apguvi (šādu uzskatu pauduši 41% PL studentu un 44% NL studentu) (skat. 4. att.).



4.attēls. *Studentu viedoklis par studiju kursu, ar kuru varētu saistīt Civilās aizsardzības kursa apguvi (% no respondentu skaita grupās)*

Figure 4 *Students' opinion on the study course that could be related to the Civil Defence course (in % from the number of respondents in groups)*

Daļa studentu saskata iespēju saistīt Civilās aizsardzības kursa apguvi ar Darba aizsardzības kursa apguvi (27% PL studentu un 25% NL studentu), Arodveselības kursa apguvi (17% PL studentu un 14% NL studentu) vai Cilvēka drošības kursa apguvi (12% PL studentu un 13% NL studentu).

### **Secinājumi** **Conclusions**

1. Lielākā daļa aptaujāto studentu uzskata, ka Civilās aizsardzības kursam ir jābūt obligātam studiju kursam visās studiju programmās. Tas liecina par studentu izpratni par Civilās aizsardzības kursa nozīmīgumu.
2. Vairums aptaujāto pedagogijas specialitāšu studentu ir izpratuši visas svarīgākās Civilās aizsardzības kursa tēmas. PL studenti ir labāk izpratuši par NL studentiem tādas tēmas kā valsts materiālās rezerves un civilās aizsardzības aizsargbūves.
3. Lielākā daļa aptaujāto studentu uzskata, ka Civilās aizsardzības kursā nepieciešams iekļaut arī tēmas par valsts aizsardzību.
4. Par interesantākajām Civilās aizsardzības kursa tēmām vairums aptaujāto studentu uzskata tēmu par pirmās palīdzības sniegšanu, tēmu - katastrofas, to iedalījums un tēmu par katastrofu pārvaldīšanu.
5. Studentu gūtās svarīgākās atziņas, apgūstot Civilās aizsardzības kursu, ir gatavība rīcībai dažādās ārkārtas situācijās un gatavība sniegt pirmo palīdzību nelaiemes gadījumos.
6. Studenti saskata iespēju saistīt Civilās aizsardzības kursa apguvi ar kāda cita studiju kursa apguvi. Lielākais aptaujāto studentu skaits uzskata, ka Civilās aizsardzības kursa apguvi varētu saistīt ar Vides aizsardzības kursa apguvi.

### **Summary**

Educational institutions of Latvia have a duty to provide compulsory Civil Defence courses to students in higher, general, and vocational education. Introducing a Civil Defence course at universities could provide young people with the information which they need to survive safely and confidently in extraordinary situations. Although most students already have such a course in their study content, opinions about its necessity are divided. The aim of the study was to find out the attitude of the students of pedagogy specialties of the University of Latvia towards the Civil Defence course, to study the students' self-assessment of understanding the most important topics of the Civil Defence course and the most important insights learned by students during acquiring the Civil Defence course. The questionnaire of full-time (FT) and part-time (PT) students of pedagogy specialties from the University of Latvia was carried out. The questionnaire was done after completing the Civil Defence course. 174 respondents: 86 FT students and 88 PT students were questionnaire. The results of the survey showed that most of the questionnaire pedagogy specialties students consider, that Civil Defence course must be included in all higher education study programs. 62% of surveyed FT students and 72% of

surveyed of PT students consider that Civil Defence courses should be compulsory in all study programs, 33% of FT students and 24% of PT students believe that Civil Defence course must be included only in several study programmes but only 5 % of FT students and 4% of PT students mark that Civil Defence course should not be a compulsory course of study. These results reflect the students' awareness of the importance of the Civil Defence course. The majority of the surveyed students after completing the course have understood all the most important topics in the Civil Defence course. Most of the surveyed students believe that topics related to national defence should be included in the Civil Defence course. As the most interesting topics of the Civil Defence course students have found first aid, disasters and their classification and disaster management. The most important insights learned by students during acquiring the Civil Defence course are emergency preparedness and first aid for emergencies. Students see an opportunity to combine the acquiring of Civil Defence course with the mastering of another study course. The majority of surveyed students believe that the Civil Defence course could be linked with the Environmental Protection course.

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## **PEDAGOGICAL PROMOTION OF PROFESSIONAL SELF-REALIZATION OF FUTURE TEACHERS OF PHILOLOGICAL SPECIALTIES**

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**Abstract.** *In the world of rapid change, the concept of professional self-realization is becoming an essential development factor for professionals. Modern teachers of philological specialties should be not only masters in their field who have indispensable professional and methodological competencies but also be ready to provide all necessary services for the current generation, which agrees with the framework of the “New Ukrainian School”. To correspond to the above-mentioned standards, a philology teacher must strive for self-development and self-improvement. The readiness of future teachers for professional self-realization is an integrated quality manifested in independent productive activity aimed at personal self-development and self-improvement. Based on theoretical research and practical experience, we have determined pedagogical conditions for the formation of readiness of future teachers of philological specialties for professional self-realization: 1) ensuring readiness for the professional self-realization of future teachers of philological specialties based on the acknowledgement of career prospects; 2) actualization of the acmeological component of the vocational training of future philologists; 3) phased inclusion of future philologists into the practically focused activity during their teaching practice. The effectiveness of these pedagogical conditions has been examined through carrying out the pedagogical experiment and a set of questionnaires and tests to define the level of readiness for professional self-realization. As a result, we have developed a system of practical classes “I am a future professional” and corrective tutorials with future teachers of philological specialties and developed common psychological and pedagogical guidelines for supervising teaching practice.*

**Keywords:** *professional self-realization; pedagogical conditions of training for professional self-realization; future teachers of philological specialties; career prospects; practically focused activity.*

## **Introduction**

Modernization of the Ukrainian system of education necessitates identification of new strategic and tactical guidelines for training future teachers. Preparation of students for the educational process overall and teaching in particular aim at revealing potential capabilities of future specialists.

Modern scholars approach the problem of professional self-realization in the context of the reformist trends of social progress.

According to the findings of the scientists (Antsyferova, 2006; Ionova, 2015; Milchevska, 2014; Romenets, 2006, etc.), a person's self-realization presupposes considerable self-improvement and is characterized by changes in the self-awareness of the social status and ways of interaction with the outside world.

The integration-activity approach to the theoretical analysis of the structure and content of professional self-realization of students is attracting increasing interest nowadays. In this regard, it is important to determine the motives of self-realization (Leontiev, 2003); the pace of self-realization (Rean, 2004); the measures of self-realization (T. Titarenko, 2003); study the formation of a teacher's personality in the system of higher pedagogical education (Gurevich, 2010; Kan-Kalik, 1988). Finally, the research should address such issues as readiness of future teachers for self-education and professional self-development (Bech, 2003); professional training of future teachers of philological specialties (Ivanitskaya, 2014).

The specific character of philological specialties is manifested in the system-functional paradigm of thinking, emotionality, reflexivity, empathy, communicative expressiveness, and multiculturalism of the content component, which actualizes the need for the development of tolerance (N. Ivanitska, 2014).

Hence, acmeologization of the professional activity of philology teachers and development of their axiosphere are becoming strategically important tasks for the system of higher pedagogical education. Ultimately, philology teachers perform the functions of intercultural communication, organizing the process of mutual recognition and enrichment of cultures that transforms into the ability to teach language as a national-cultural phenomenon and form a national value-based linguistic picture of the world. In the present contradictory conditions, philological specialties, through "communication" with multi-genre works of art, including folk treasures, significantly affect the spiritual enrichment of students. Therefore, the realization of the creative approach to the professional training of philology teachers gains special attention and involves strengthening the existential component of the professional activity, which attests to the high level of professional skills that can be achieved due to meaningful professional self-realization.

At present, it is necessary to address from a practical scientific perspective a range of topical issues embodied in the following contradictions: between the recognition of the personal determinism of professional self-realization and the uncertainty of the components and criteria of future specialists' readiness for the practical realization of a professional plan; between the active use of the term "self-realization" and a significant variation in the definition of this concept; between the university teachers' awareness of the need to form the basis for professional self-realization and gaps in the corresponding organizational and methodological conditions; between the social demand for teachers of philological specialties capable of continuous professional self-realization and the inadequate level of its formation in graduates of pedagogical universities (Poseletska, 2016).

The aim of the article is to study the formation and the development of professional self-realization and to verify experimentally the pedagogical conditions for the professional self-realization of future teachers in the process of professional training. The study has the following objectives: 1. To investigate the problem of preparing future teachers of philological specialties for professional self-realization at the interdisciplinary level; 2. To determine pedagogical conditions for the training of future teachers and their professional self-realization; 3. To test the effectiveness of the implementation of the established pedagogical conditions for future teachers' self-realization in the process of professional training.

### **Methods**

To accomplish the objectives of the research, the study employs the following methodology: a) theoretical methods: analysis, interdisciplinary synthesis, comparison; classification and systematization of theoretical data; b) empirical methods: diagnostic (questionnaires, interviews, psychological diagnostic techniques), observation; pedagogical experiment (ascertaining and formative experiments) to test the effectiveness of the pedagogical conditions for the training of future teachers with the purpose of professional self-realization; c) methods of mathematical statistics (using Student's t-test) for processing and evaluating the data validity of the results of the pedagogical experiment and determining the quantitative dependence between the phenomena under study.

The research encompassed three stages. At the organizational stage, we specified the conceptual apparatus of the research, developed the experimental program, and carried out the ascertaining experiment. The stage of the realization of the pedagogical conditions was devoted to conducting the formative experiment. During the generalization stage, we processed the results of the experiment and determined the efficiency of the pedagogical conditions.

The formative experiment was conducted with 384 respondents: 17 teachers of higher educational establishments and 367 students of different pedagogical universities. As a result, the control group (CG) and the experimental group (EG) were formed, with 243 respondents being in the control group (CG) and 124 respondents – in the experimental one (EG).

Theoretical research and practical experience helped us to determine the pedagogical conditions for the professional training of future teachers of philological specialties. They ensured readiness for the professional self-realization of future teachers of philological specialties based on the acknowledgement of career prospects (the effectiveness of the self-realization process relates to the success of the pedagogical activity of students during their teaching practice and positive future professional guidelines, which reveals potential career prospects); actualization of the acmeological component of the vocational training of future philologists (involves expanding the subject's personal space (active orientation, awareness, initiative, goal determination, inclusion in the activity, the desire for self-regulation, self-development, and self-realization) and professional and moral enrichment, which implies increase of responsibility, sense of duty, conscience and honor, departure from inadequate personal settings and standards, which will stimulate the process of professional self-realization); phased inclusion of future philologists into the practically focused activity during their teaching practice (the ability of future philologists to realize the functions of the teaching practice indicates their readiness for professional self-realization.) (Poseletska, 2016).

To test the effectiveness of the pedagogical conditions through a pedagogical experiment, we distinguished three components in the structure of the professional training of future philologists. They are: **motivational** – characterizes the incentive aspect of readiness and contains stable motives of professional self-realization, awareness of its importance, and the system of values and attitudes that encourage a person to realize his/her professional potential; **emotional** – characterizes the sensitive aspect of the readiness for professional self-realization, involves interiorization of professional values, a sense of responsibility for the results of pedagogical activity, self-control, and the ability to control the actions that affect the performance of professional duties of a teacher; **activity** – characterizes the practical aspect of readiness, providing skills for successful professional self-realization (the ability to assess, plan, organize, and control actions).

The criteria for determining the level of readiness for professional self-realization were established based on the theoretical foundations of the study and in accordance with the developed structural model of readiness for professional self-realization. Each criterion was specified through indicators. The indicators of the *motivational-value-based criterion* are an ordered hierarchy of personal

claims, systematic self-improvement, assessment of the subjective probability of success, and interiorization of professional values of future philologists; the *emotional-volitional criterion* is characterized by the following indicators: emotional stability, formation of a sense of responsibility for one's own professional actions, the ability to integrate the emotional efforts of participants in the educational process, and employing the methods of self-regulation and achievement of equal partnership; the indicators of the *creative activity criterion* are: the ability to use the time rationally within learning and cognitive and self-education activities, the ability to determine prospects of professional growth independently, and the ability to perform self-presentation and prevention of professional deformations, inducing students to discover their own literary and linguistic talents.

To check the level of the formation of these three components during the experiment, the following questionnaires and intelligence tests were used: 1) the motivational component – “Motivation of success and fear of failure” (questionnaire by A. Rean, 2004), test-questionnaire “Need for achievement”, “Self-assessment of creative potential” (Fetiskin, 2005); the method of revealing the style of self-actualization; the method of diagnosing the readiness of future teachers for creative self-realization in professional activity; 2) the emotional component – Spielberg's method; emotional satisfaction with the professional choice made (questionnaire); the level of development of empathic predisposition and questionnaire by H. Eysenck aimed at identifying typical behavior); 3) the activity component – the questionnaire research aimed at determining the attitude of students to conflicts and the choice of response in conflict situations (questionnaire modified by A. Batarshv.); determination of personal orientation; the hierarchical structure of students' values; identification of the formed ideas about the career growth of university students as a component of value-based orientations (questionnaire survey), and the method of detecting the complex of authority threat (Poseletska, 2016).

Based on the determined criteria and indicators, the levels of readiness of future teachers of philological specialties for professional self-realization are identified and characterized as high, sufficient, and basic.

## **Results and Discussion**

To realize the first pedagogical condition, the students were given examples of outstanding teachers who have reached pedagogical excellence. The following methods were used: explanation, refutation, and involvement in discussions without moralization. After the diagnostic techniques had been conducted, their results were used as a foundation for the program of students' self-development.

To realize the second pedagogical condition, we have developed and tested for three years the system of practical classes “I am a future professional” and the system of corrective tutorials with future teachers of philological specialties (30 hours). The overall purpose of the research was to expand the methods of pedagogical interaction with students by enhancing the mechanisms of their personal reflection and developing empathic predisposition.

The program of corrective tutorials is developed based on the subject-activity approach. The main idea is that an individual does not only modify the activity and improve its results but also changes him-/herself by reinterpreting his/her own experience. Another positive aspect of this approach is that future teachers of philological specialties unlock their potential with regard to acquiring knowledge and skills as well as take responsibility for their implementation during teaching practice.

**The main idea** of the program is to promote psychological and pedagogical preparation of future teachers of philological specialties for effective interaction with students as an indicator of successful self-realization.

**The objectives** of the program are to increase students’ knowledge about the conditions of effective interaction in the educational process, to give students an opportunity to realize themselves as subjects of professional interaction, to form their adequate self-esteem, and to improve students’ practical skills of implementing empathic abilities in the process of communication.

**The content** of the program reflects a sequence of stages aimed at improving the components of pedagogical interaction: cognitive, behavioral, and emotional. The conditions for the successful implementation of the program content presuppose students’ active involvement into the proposed activity, corrective interference of the facilitator, and students’ systemic self-analysis of their emotional state based on feedback and personal reflection.

**A specific feature** of corrective tutorials is the possibility to model the methods of interaction with further analysis and designation of more effective variants, self-realization, and immediate feedback as well as professional self-identification in simulated conditions with the prospect of its testing during the teaching practice.

Each tutorial has a specific structure combining the following elements: introduction, when students tune into the studies, reduce anxiety and tension, and are stimulated to active work; explication – acquaintance with the scientific category and explanation of its essence and significance for the process of pedagogical interaction; practical part, which involves the development of skills and abilities; the final part embracing the analysis of the performed work, self-analysis of participation in the proposed activities, and reflection about the emotional state.

To expand the information component with regard to the essence and mechanisms of professional self-realization, we have developed a system of classes in English language practice, where the students were looking for their own ways of solving pedagogical tasks, modeling fragments of the lessons in which they independently and creatively solved the suggested problems and demonstrated their results with further analysis. For example, at home reading classes, the students analyzed personal and professional qualities of a teacher, which could contribute to his successful professional activity (based on *The Excellent 11* by Ron Clark) (Clark, 2004).

The third pedagogical condition was realized in several stages: observation of the pedagogical process, modeling the fragments of pedagogical actions, practical realization of certain pedagogical goals, and creative use of innovative ideas in their own pedagogical activities (Poseletska, 2017).

The determined stages were realized under the conditions of clear organizational delimitation. However, from the intellectual-cognitive perspective, such clear-cut boundaries are not necessary, as thinking activity at one stage transforms into practical activity at the next stage. Thus, the ideas of problem-based and innovative-creative learning with a focus on the development of students' creativity and integrity of teaching practice can be successfully implemented. We, therefore, claim that the identified stages of teaching practice can contribute to the formation of the need for professional self-improvement and professional self-realization in students. It is possible to realize this task through carrying out personal diagnostics and modeling variants of possible pedagogical influence based on the achievements of experienced teachers and students' first personal experience.

Further, we developed common psychological and pedagogical guidelines for supervising teaching practice and outlined the tasks for the emotional support of students. The latter include eliminating factors contributing to high levels of situational anxiety and excessive agitation in students; instilling confidence in them; displaying empathy, sincerity, and unconditional positive attitude towards students; while assessing students' professional behavior, focusing on its positive aspects and most effective manifestations; assisting students in overcoming psychological problems.

Thus, while preparing students for teaching practice, it is necessary to conduct psycho-propaedeutic activities: identifying and analysing anticipated challenges; holding individual and group consultations on specific aspects and objectives of teaching practice; inviting junior students to the final conferences on the teaching practice of senior students; organizing annual camps and giving lectures and practical classes to prevent possible difficulties ("How we can take into account the individual characteristics of each child in the classroom", "Methods of stimulating the cognitive activity of students in the classroom",

“Conflict situations and ways of their prevention”); organizing active social and psychological training to boost students’ self-esteem, develop skills of confident behavior, and reduce excessive anxiety before conducting a trial lesson (Poseletska, 2016).

During the experiment, the students reacted positively to the recommended algorithm of preparing for a trial lesson. According to this algorithm, students can reconstruct their preparation for a trial lesson, which will help outline specific tasks at the next stages of teaching practice, relieve excessive emotional stress, and positively influence their motivation for other professional activities, which will stimulate the need for students’ professional self-realization.

In addition to submitting the reporting documentation at the end of their teaching practice, the students were asked to prepare a reflective diary where they were encouraged to express their feelings about the first teaching experience, with a focus on its ups and downs and recommendations for improving their activity.

The results of the research conducted within the forming stage of the experiment revealed that the developed and tested program directly impacted the students’ professional self-realization and reinterpretation of individual codes of behavior in the situations of difficult communication.

During the generalization stage, we processed the results of the experiment and determined the efficiency of the pedagogical conditions by comparing the results of the experimental (EG) and control (CG) groups with the help of Student’s *t*-test. The analysis of the results of the experiment revealed that the indicators of the levels of readiness for professional self-realization increased significantly in the EG, while in the CG, there was slight positive dynamics (Table 1). The differences between the groups are significant and constitute the value of  $p \leq 0.05$ .

*Table 1 Levels of readiness for professional self-realization of future philologists*

Level	Group			
	CG		EG	
	Before	After	Before	After
high	6,0%	8,3%	6,8%	15,4%
sufficient	42,8%	44,4%	44,7%	54,1%
basic	51,2%	47,3%	48,5%	30,5%

According to the results of the summary table (Table 1), it can be stated that after the experiment, the changes in the EG are more significant. Thus, high-level indicators in the CG increased by 2.3%, and in the EG – by 8.6%; correspondingly, the indicators of a sufficient level in the CG increased by 1,6%, and in the EG – by 9,4%; the basic level in the CG decreased by 3.9%, and in the EG – by 18.0%.

Therefore, we can identify a generally positive tendency to changes in the EG due to the growth of the indicators of high and sufficient levels and, accordingly, the decrease of the indicators of the basic level. The results have confirmed our hypothesis that the training of future teachers of philological specialties for professional self-realization can be effective by implementing the identified pedagogical conditions.

Ukraine's modern educational space is characterized by rapid changes occurring due to conducting educational reforms as part of state policy. These transformations are mainly associated with the need to update the goals, content, and forms of learning as well as introduce innovative technologies into the educational process. Of equal importance is the preparation of a new generation teacher who would provide all the educational services necessary for the modern generation, which corresponds to the framework of the "New Ukrainian School". In this context, the most pressing issue is preparing future teachers of philological specialties who have indispensable professional and methodological competencies and are ready for self-development and self-improvement. The readiness of future teachers for professional self-realization is an integrated quality manifested in independent productive activity aimed at personal self-development and self-improvement. Hence, pedagogical educational institutions should promote professional self-realization of future teachers of philological specialties, which is possible under the above-mentioned pedagogical conditions that entail providing professional information, diagnosing and maintaining professional qualities of future teachers, developing empathic predisposition and expanding pedagogical interaction techniques as well as involving future philologists into practically oriented activities during teaching practice.

### **Conclusions**

It can be stated that after the experiment, the changes in the EG are more significant. Thus, high-level indicators in the CG increased by 2.3%, and in the EG – by 8.6%; correspondingly, the indicators of a sufficient level in the CG increased by 1,6%, and in the EG – by 9,4%; the basic level in the CG decreased by 3.9%, and in the EG – by 18.0%.

Therefore, we can identify a generally positive tendency to changes in the EG due to the growth of the indicators of high and sufficient levels and, accordingly, the decrease of the indicators of the basic level. The results have confirmed our hypothesis that the training of future teachers of philological specialties for professional self-realization can be effective by implementing the identified pedagogical conditions.

The analysis of the quantitative and qualitative results of the experimental study testifies that the research aim, namely the substantiation of the pedagogical

conditions for the training of future teachers of philological specialties for professional self-realization, has been achieved.

We have proven the efficiency of the identified pedagogical conditions and devised the methodology for developing readiness for professional self-realization in future teachers of philological specialties. Further research should target an individual approach to training students for professional self-realization and the theoretical substantiation of the faculty's work with future teachers of philological specialties aimed at preparing them for professional self-realization.

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## INNOVATIVENESS OF DIDACTIC PRACTICE IN THE FIELD OF CURRENT PEDAGOGICAL KNOWLEDGE

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**Abstract.** *The theory of education, which is didactics, in the realities of today's educational practice and upbringing is becoming more important in the work of a teacher. The theory of education is improving thanks to newer empirical knowledge created on innovative practice. Currently, there is a traditional division of education theory into general, specific, environmental and special didactics. However, in terms of new teaching aids and brain research methods, it is worth considering its new meaning.*

**Keywords:** *educational theory, didactics, constructivism, electroencephalographic research*

### Introduction

The article will present considerations regarding the development of present main didactic in connection with the development of detailed didactics. Detailed didactics set a new teaching trend using modern teaching aids (Prauzner, 2017a). The theme is extremely extensive, and this work will present only selected problems associated with the emergence of modern teaching. The conclusions resulting from the author's research presented in the references prove that modern didactic aids, especially in the field of technical education, influence didactic efficiency. Teaching effectiveness can also be assessed by QEEG electroencephalographic tests.

Didactics is the science of education and self-education. The name “didactics” comes from the Greek language, in which “didaktikos” means “informative” and “didasko” - “teach” (Bereźnicki, 2007, p. 13). The turn of the 19th and 20th centuries influenced by the slogans of the “new school” proclaimed, among others, by John Dewey (1859-1952), brings ideas of active learning through action. Supporters of this field have highlighted the activities of students and focused on their creative role in the learning process (Bereźnicki, 2007, p. 15). The theory of education meets the requirements of scientific theories, has its own scope of research and research methods specific to it, which allows enriching the theory and verifying innovative proprietary propositions, as well as assessing common teaching practice. Didactics is a theoretical science that defines known educational models and at the same time sets new practical trends (studies the

intentional behavior of teachers and students) (Juszczak, 2008). Therefore, any attempt to present didactics as a theoretical proposal with indications of innovation in teaching practice becomes particularly desirable during the period of reconstruction and improvement of the education system, which changes in accordance with current socio-economic needs and challenges.

### **The importance of detailed didactics in developing one's own cognitive activity**

Didactics in the Polish Language Dictionary edited by Witold Doroszewski has two meanings: 1) pedagogy section dealing with teaching methods; 2) instructing, moralizing. Didactics examine general issues related to the teaching attitudes of all subjects, detailed didactics also called methodology, deals with specific issues of teaching a selected subject or group of subjects (...). Didactics deals with the study of the purposes and content of education (learning and teaching); didactics is praxeological - it is an important theory of effective teaching. Didactics is tackling the problems concern the purposes, content and methods of teaching (Doroszewski, 1966, p. 482).

Modern didactics helps teachers to constantly improve their teaching skills and enrich teaching practices and organize students' cognitive activity. It seems right dictum that knowledge of reality should stimulate us to innovation, which is intended to eliminate unnecessary and incorrect didactics phenomena. Innovation will be more essential the better that our experience about current problems in the broadly understood education system will be experienced. Right and effective education depends primarily on the knowledge and use of modern didactics. Modern didactics should be understood as innovation in practical activity adequate to current social needs. Therefore innovation and all kinds of school reforms seem to be a continuous process.

This problem in the field of general didactics has been dealt with and dealt with for many years by such great educators of Polish science as: Bogdan Nawroczyński, Kazimierz Sośnicki, Zygmunt Mysłakowski, Lucjan Zarzecki, Sergiusz Hessen and then Wincenty Okoń, Władysław Piotr Zaczyński, Tadeusz Lewowicki, Czesława Kupisiewicz, Kazimierz Denek and Franciszek Bereźnicki, Stanisław Palka et al. (Półturzycki, 1999, p. 8). Of course, in the field of detailed didactics, names such as Tadeusz Nowacki, Zygmunt Wiatrowski and others are not foreign to the Polish reader. The current theory of teaching goes back to ever newer fields of knowledge, an example of which is the more widely discussed neurodidactics, whose representative in the world of science can be M. Spitzer and M. Żylińska.

Półturzycki note special attention to the teacher's awareness of the realization of the set educational purpose through the implementation of proper conduct in

the implementation of the lesson as the basic form and control, and assessment of learning outcomes (Op. Cit., p. 9). Modern didactics is also an attempt to change the consciousness of the student himself in undertaking actions based on self-education and thus developing his own cognitive activity. In academic education, the process of self-education is often the basic mode of learning, based primarily on the search for knowledge and the acquisition of skills by all methods.

The role of the teacher changes its functional meaning from a serving attitude to an attitude in which the teacher is only a guide of the student through current knowledge resources. Modern information technologies, which are the basic tool of modern didactics, support this relationship. One of the basic roles of a teacher is currently introducing innovation by enriching the teaching methods used, for example, using modern teaching aids. Wincenty Okoń, in the "Introduction to General Didactics", writes that didactic aids "... *effectively help to transform the traditional system into a modern teaching and learning process that activates students.*"

Didactics studies the aims and content of general, polytechnic, vocational education and the conditions of teaching. General didactics deals with the problems of teaching all subjects, while detailed didactics (methodology) refers to specific subjects of teaching. It should be mentioned that the main problems of general didactics very often result from the problems of detailed didactics, in which the education methodology provides the most important data and problems of modern education, e.g. media. A new aspect at general didactics is the result of innovation in the field of detailed didactics.

J. Pólturzycki aptly expressed idea in his words (after Zaczyński, 1993): the field of interest in the theory of general education has been changed with the emergence of modern scientific aids. General didactics deals with the educational process, including: didactic purpose, content and methods, means and organization of education, as well as researching the social and material environment in which this activity takes place. The theory of general education establishes the causal relationship between the work of the teacher and the work of students and seeks such methods that will guarantee the correct and most effective effect of education. The theory of general education has, among other things, a diagnostic function, and thus provides information on a given state of affairs, not always only positive but very often negative with a common ground resulting from problems dealt with in other fields of social, humanistic or technical sciences. Thanks to this, it also informs us about negative aspects and gives tips on how to remedy them (prognostic function). He deals with methods, means and conditions for the implementation of teaching objectives, and also has an instrumental and technical function.

In the era of the development of the information society, based on the use of modern technologies, general didactics strictly reaches for innovative

instrumental solutions. The subject of teaching is, *inter alia*, the study of teaching aids and optimization of the conditions for their effective use in education (Półturzycki, 1993, p. 134). The author emphasizes that the division of didactics into general and specific (as well as specific types of education, environmental and specialized) loses its relevance, while it emphasizes the fact that this division in terms of current didactic problems becomes problematic and the important role of scientific publications of the nature is emphasized mixed - environmental and specialist.

In the author's assessment, the perspective on modern theory of general education takes on an important aspect. The theory changes in its general canons quite slowly, while faster changes occur in theories and subject matter as well as the sciences interacting on it. J. Półturzycki emphasizes the fact that this necessitates the systematic improvement and development of educational practice. Didactics is science and skill at the same time, and to master one more thoroughly, it is not enough just academic knowledge but above all educational practice is necessary. Modern teaching aids based on information and information technology are an indispensable element of the theory of general education, supporting the process of learning and thus determining the effectiveness of education (Bruce, Calhoun, & Hopkins, 2010). Modern teaching aids are introduced at virtually all levels of education. We can read about many problems of their use in modern didactics in numerous scientific publications on this subject (Prensky, 2001; Palloff, 2007; Collins, 2009). Pedagogy as a science of education and teaching, belongs to social sciences and deals with the development and change of mechanisms of upbringing and education throughout all the human life (Brown, 2019; Carr, 2011). The theory of general education as a subdiscipline of pedagogy is a response to current problems of upbringing and education of the young generation in the age of digitization of the world. Literature emphasizes the essence of knowledge passed on by practising teachers in various forms of improvement for general education, because it is thanks to teachers and lecturers that didactics is able to developing. It is their experience transmitted, for example, through the media and reports on the effectiveness of general education, highlights educational problems, that are often invisible to the general public and remain in the shadow of interest. J. Półturzycki emphasizes that “own educational practice gradually clarifies the principles and problems of didactics, allows them to better understand and implement them in the self-organized didactic process.” (Półturzycki, 1999, p. 31).

The object of research explaining the reason for the existence of pedagogy as a science is educational practice, which consists of many phenomena, such as the operation of educational institutions, interpersonal relations prevailing in them, changes occurring in people subjected to educational effects, etc. Pedagogy exists regardless of the intentions and actions of scholars. Their task, however, is

to describe this practice, explain phenomena that destabilize educational activities, discover the results to which education leads (Kwieciński & Śliwerski, 2004, p. 18). For the author, the above words are a determinant of practical activities within pedagogy as a science, including about education. Who, if not a teacher or lecturer, receives examples of this in his professional work? The educator is the first person and nearest to the student in the didactic process. It is he who implements the objectives of formal education from above, he is the one who feels the most effects of his professional work - the author recalls.

On the other hand, his attitude is also an indicator of didactic progress, which is an extremely dynamic process which is also the result of all socio-economic changes of a global nature. The evaluation of didactic practice provides researchers with new hints as to the validity of innovations introduced in the education process. That is why observation of the educational environment, its analysis of activities, and measurement of work effects through the prism of social and economic needs are so important. Consequently, the education of a society based on modern educational practice in accordance with accepted standards in the sociological perspective is the level of national culture and thus its impact on the harmonic flourish of other scientific subdisciplines. It is an indicator of the progress of civilization, a place in the scientific and cultural achievements of the world and a guarantor of order in the world. Failure to care for the development of science and the level of education found its place in the history of each nation. Educational practice is diverse in many ways (it researches, among others, the educational impact of the media, popular culture, family, peer groups), and pedagogy is the science describing this practice, this diversity of pedagogy must reflect the state of education. This is also because the degree of specialization of scientific knowledge in specific education contexts requires scholars of diverse cognitive competences to study them. Thus, pedagogy is a field composed of many scientific sub-disciplines dealing with various areas of educational practice (Rubacha, 2004, p. 21).

Pedagogy deals with identifying, naming and defining all the facts that make up the practice of education (Op. Cit., p. 24). In terms of the practice of pedagogical research “... a qualitative researcher has a special opportunity to learn not only the facts, educational events, but also the circumstances in which they took place, the effects they caused, and the meanings that people gave them. What's more, he observes the same facts from different perspectives: from the point of view of a good, weak student or teacher.” (Op. Cit., p. 34-35).

### **Concluding remarks**

The effectiveness of education is the result of implemented innovations in the education process. The selection of appropriate teaching methods and teaching aids determines the student's cognitive activity during the teaching classes. The teacher's many years of experience are conducive to the organization of lessons. Cognitive activity can be assessed not only by assessing work, but also accurately observed, for example, by using modern observation methods thanks to electroencephalological research such as EEG and QEEG. The examples are interesting conclusions obtained by the author in the field of detailed didactics in the technique and related fields (Prauzner et al., 2019; Prauzner et al., 2018). Detailed conclusions were included in numerous author's publications, which clearly indicate that the use of multimedia teaching aids on the basis of deterministic computer simulations programs are important in shaping the student's active attitude in the teaching process (Prauzner, 2010; 2013). Therefore, innovation in teaching is a multidimensional element and requires great diligence on the part of not only the teacher himself but also the continuous shaping of the correct attitude and commitment of the student himself in the teaching process.

The overriding object of each teaching process is, therefore, optimal mental, emotional and volitional development of the student, i.e., all conscious, planned and systematic didactic and educational interactions ensuring general or vocational education (Kupisiewicz, 2005). In the problem task, the most important method, from the point of technical education, not only basic mental and motor operations are involved, but also other activities less related to the task (Prauzner, 2015a; 2015b). Further tasks appearing in life are then solved in the same way through acquired behaviors and reactions. In addition, if the reactions are accompanied by a feeling of satisfaction, and therefore positive feelings, then the acquisition of these skills will be easier and fixed for a longer period, otherwise the degree of solution the problem will be more difficult (Półturzycki, 1999). In this field, importance of modern teaching aids in the teaching process becomes extremely important. As emphasized by J. Półturzycki, the learning process is also diversified by the individual abilities of the student, often appearing as factors independent of the teacher's and the teacher's intentional actions. Their cause is seen in biological and psychological development shaped under the influence of the surrounding local environment. The local environment for the student is a family environment but above all the school itself. The school (college) understood formally as an educational institution, but also in a more social perspective as a peer group.

Modern didactics is an empirical and analytical science dealing with the description and explanation of facts, phenomena and processes occurring in school and social reality. The above theoretical considerations regarding the field

of influence of didactic practice induce the reader to further reflection (Praužner, 2018). The importance of specific didactics in solving problems of general didactics, is invaluable to indicate the specific problems faced by modern education.

A thorough analysis of the topic has been included in the published scientific monography and papers (Praužner, 2016a; 2016b; 2017b). The publish presents research on the importance and role of modern simulation programs in technical education (Ptak, 2016; Ptak & Praužner, 2019). The main area of research has been included in a number of problem questions:

Does and to what extent the use of deterministic computer simulations (DSK) develop students' creative thinking in the field of cognitive ability in technical education?

Does and to what extent does the use of DSK develop students' technical imagination in the field of cognitive skills in the field of technical education?

Is the use of DSK conducive to understanding physical phenomena occurring within the analyzed technical problem on the basis of the models made and simulating their operation in the field of cognitive ability in the field of technical education?

Is the knowledge of manual of DSK conducive to shaping the ability to solve professional problems?

To what extent do DSK affect the resource and acquisition of new technical knowledge?

Do deterministic computer simulations stimulate interest in a given field of science?

Do you think that the simulation method in which DSK was used can be considered as an activating and motivating method for further learning?

Has the acquired experience of working with DSK influenced the decision-making related to additional self-education in order to improve professional qualifications and competences?

In the studies have been performed statistical calculations confirming the assumed hypotheses resulting from the above questions and showing the strength of relationships between individual independent and dependent variables. All hypotheses have been accepted as true.

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# VALUE ORIENTATIONS, EMOTIONAL INTELLIGENCE AND INTERNATIONAL PEDAGOGICAL INNOVATIONS

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**Abstract.** *The primary goal of this paper is to portray how the value orientations and priorities can direct us to new pedagogical cores and innovations and leadership. First of all, we will examine how the students' value orientations and priorities become a pertinent factor in conceiving new teaching practices that enhance the amiable learning atmosphere and guides us to new ideas and leadership. Second of all, we will focus on how value orientations and priorities expand our current knowledge and comprehension of the students' learning styles and demands and gravitate teachers and students to the concept of emotional intelligence; this then leads students and teachers to new international and interdisciplinary environment(s) and to new teaching and learning practices. In addition, our aim is to address the students' value orientations and priorities and apply them to steer us to design new learning environment(s) and to the transformational and primal leaderships. Furthermore, our intent is to render how value orientations guide to the emotional intelligence, which then directs to new practices, ideas and innovations. Moreover, we will share specific examples of successful pedagogical innovations that lead to the emotional intelligence and were guided by the students' value orientations and priorities. Throughout this paper we will remit the following vital question: how do we link the value orientations together with the emotional intelligence and the transformational and primal leaderships?*

**Keywords:** *value orientations, emotional intelligence, pedagogical innovations, transformational leadership.*

## Introduction

Emotional Intelligence is defined as the ability to describe and understand others' emotions and to handle interpersonal relationships and conflicts smoothly and empathetically. In addition, the Emotional Intelligence, Emotional Leadership, Emotional Quotient and the Emotional Intelligence Quotient are the capacity of individuals to recognize their own emotions and others' emotions, discern between different feelings and comprehend them appropriately. Applying the emotional intelligence and the information that directs to rational thinking and to managing and adjusting the emotions in order to acclimate to the

circumstance(s) to achieve the goals (Daniel Goldman). Emotional intelligence is an essential source that directs to critical thinking, flexibility, tolerance, effective decision making, leadership and innovations (Epstein, 1998).

Throughout the paper we will remit the following questions: why are the Transformational and Primal Leaderships pertinent concepts in preserving the positive learning environment and inspiring students to learn? Why are the students' value orientations essential for future boosts and innovations and how to assess them accurately and precisely for further improvements (Hussain & Khan, 2016)? In addition, how to apply the value orientations and the emotional intelligence to design new innovations that correspond to the Primal Leadership while encouraging and enhancing critical thinking (Epstein, 1998)? What impacts and differences do the new practices and innovations produce and how will the students and participants benefit from them?

First of all, our goal of this paper is to render how the students' and colleagues' feedback becomes an essential tool that guides us to the students' value orientations and how to link value orientations together with the emotional intelligence and the transformational and primal leaderships to increase the students' participation and their learning inspiration. Second of all, our aims are to then apply the emotional intelligence and the two leaderships to design new teaching themes, practices and innovations that enhance the learning environment, persuade students to learn and retain the students' eagerness and support.

Also, our paper's aim is to accurately apply the students' and colleagues' feedback as guides to emotional intelligence, which then leads to tweaking the ambience of the mini-courses and seminars with the introduction of new teaching themes, practices and innovations that enhances the students' interest and participation. In addition, our objectives are to depict how feedback, leadership, and the students' value orientations blend together when designing new teaching practices to boost the students' curiosity and partaking.

Furthermore, the paper's intents are to emphasize how vital it is to be flexible to the students' value orientations; value orientations are a vital guide and tool to designing and implementing new themes and pilots that direct us to new teaching practices and retain the quality leadership (Corley, 2010). In fact, we will apply the data and feedback during the last 10 years by using the students' and participants' evaluations while teaching the mini-courses, conducting the seminars and the presentations and workshops at conferences. Finally, our intents are to emphasize how deciphering the students' and participants' feedback directs to value orientations, which then stimulate new teaching themes, practices and hence guide to the emotional intelligence and the two leaderships while designing and implementing new ideas; in particular, creating a positive and amiable learning atmosphere that inspires the students to learn. We will thoroughly

analyse the data and feedback from the mini–courses and seminars conducted at Riga Technical University, Liepaja University and the Rezekne Technical Academy (RTA).

### **Students' Value Orientations and New Pedagogical Practices**

Flexibility to the students' feedback and implementing new practices from the students' evaluations is the first vital step to improving the students' and participants' engagement and in the development of new pedagogical practices (Orlova & Radin, 2019). Implementation of the students' comments and concerns enhances the Transformational and the Sustainability Leaderships, influences positive changes and provides long–term learning (Orlova & Radin, 2018). The students' feedback also provide several additional beneficial guides that lead to the comprehension of the students' value orientations. The students' value orientations change analogously with the new political and cultural changes, educational reforms, technological advances and with the current international influences. On one hand it becomes a challenge to keep up with the students' value orientations. On the other hand, it is an art and science to design new themes, practices and innovations to address the students' learning styles and needs in order to retain their curiosity and engagement. Furthermore, it becomes a bigger challenge to render the concept of emotional intelligence to the students while designing and implementing new pedagogical practices. However, conveying the emotional intelligence is essential in order to encourage critical thinking together with creativity and leadership to the students (Curran, Morris, Farrell, & Woods, 2007).

For instance, Michael has been teaching the “Introduction to Photography” hands–on course in Liepaja University for four years. In this course, each student is required to present his/her photographs at the beginning of each class and while the other students then have the opportunities to comment on each photograph by offering constructive critiques; in particular, what problems do they see and how to correct the problems to enhance the quality of the photographs. This teaching style rendered a positive learning atmosphere by encouraging critical thinking and innovations. The students recommended other students to take the course and the class enrolment gradually increased. This teaching style resembles the Transformational Leadership as it spread the effective teaching practice to other students. However, some students did express concerns that emphasized their value orientations. First of all, these students wanted the course to focus a bit more on the technical photography instead of just the principles of photographic composition. Second of all, the students also expressed interest in designing a course webpage on facebook that shares the photographs among the participants and to continue the communication after the course on facebook instead of

communication by e-mail. This in fact mimics the new and more effective communication among the students; the students' value orientations lead to this new idea by suggesting to apply the current social networks to promote the course and the diversity of students' photographs. In addition, the students expressed interest in a tri-lingual course in English, Russian and Latvian. This has been a new trend in several international conferences hosted in Latvia.

Michael also conducts his annual "Risk Management Seminar" hosted by the Riga Technical University Department of Engineering Economics. The students really appreciated the special hands-on seminar that offers practical experiences in risk estimation by designing a specific risk matrix while addressing several daily related applications. Michael received very positive and supportive evaluations. On the other hand, analogous to the Introduction to Photography course, the participants from the Riga Fire Department expressed their concern that the seminar was focused too much on the design of the risk matrices. Instead of focusing on the construction of the risk matrices and how to apply them in the risk estimation, the Fire Department expressed future interest in the comparative cross-cultural seminar that compares the similarities and difference between the American and the Latvian Fire Departments and to include very unique historical cases of fire-fighting and the fire prevention techniques. They especially suggested to compare the similarities in differences in the equipment and the vehicles that are used. The participants offered to include more diversity of the fire-fighting techniques and preventions that deal with different materials, liquids and gases. These were very instrumental ideas for future seminars' themes that will attract more participants and foster a more dynamic engagement.

Furthermore, Michael leads his hands-on seminars on "Developing International & Interdisciplinary Research Coalitions" for the graduate students hosted by the Riga Technical University Doctoral School. The seminar consists of two parts; part I focuses on developing an international and interdisciplinary collaboration and part II addresses the implementation. The first time Michael conducted this seminar in June 2017 and received very supportive evaluations. Now we will compare the students' evaluations and comments during the two-year time span between the two seminars. The figure below renders the students' evaluations of the first pilot seminar conducted in June 2017:

Note that Figure 1 indicates the students' ratings of 91.2% in the topic coverage, 77.8% in the content's details, 86.6% as the narrative of the lecturer, 97.8% in the venue of the seminar, and 86.6% in the time of the seminar. In fact, the students felt that some of the ideas needed to be conveyed in more step by step details. The students also suggested to provide some practical insights that remit how to solve problems within the given deadlines and within the budgetary constraints. In addition, the students felt that more examples from personal experiences would have been beneficial by addressing factors such as how much

time is dedicated to developing and implementing the ideas, what was the motivation and provide more “inside knowledge”.

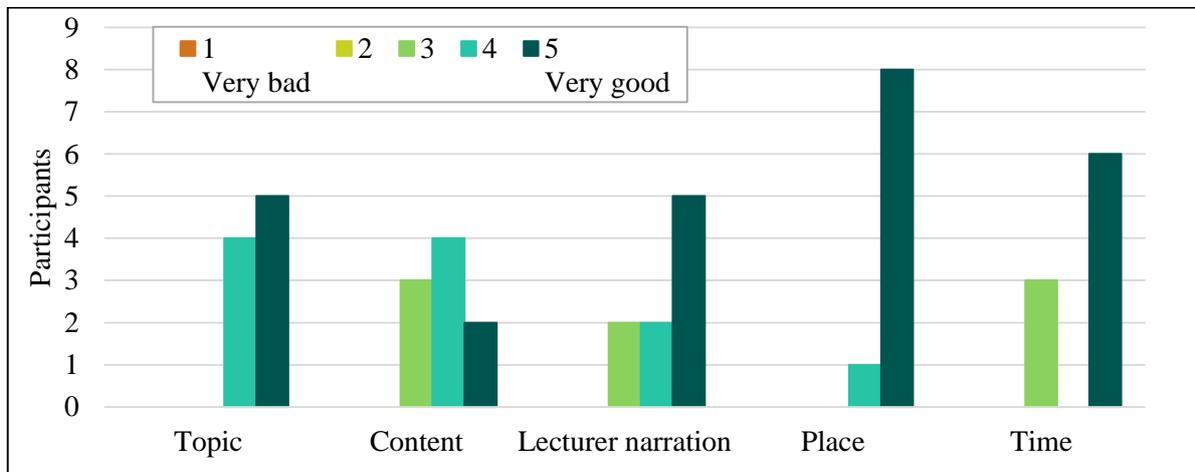


Figure 1 Students’ seminar evaluations conducted in June 2017

After carefully analysing the students’ comments and evaluations, based on the students’ value orientations, Michael’s intuition guided him to revise the seminar’s topics by introducing more related and current topics that were not addressed during the first implementation and sharing more practical experiences that relate to the students’ value orientations, needs and goals. In addition, by applying his intuition, Michael decided to comprise more class discussions that exposed the students to questions such as the understanding what are the limited resources and how to function effectively within the constraints and the limited resources. Figure 2 depicts the students’ evaluations of the seminar conducted in June 2019.

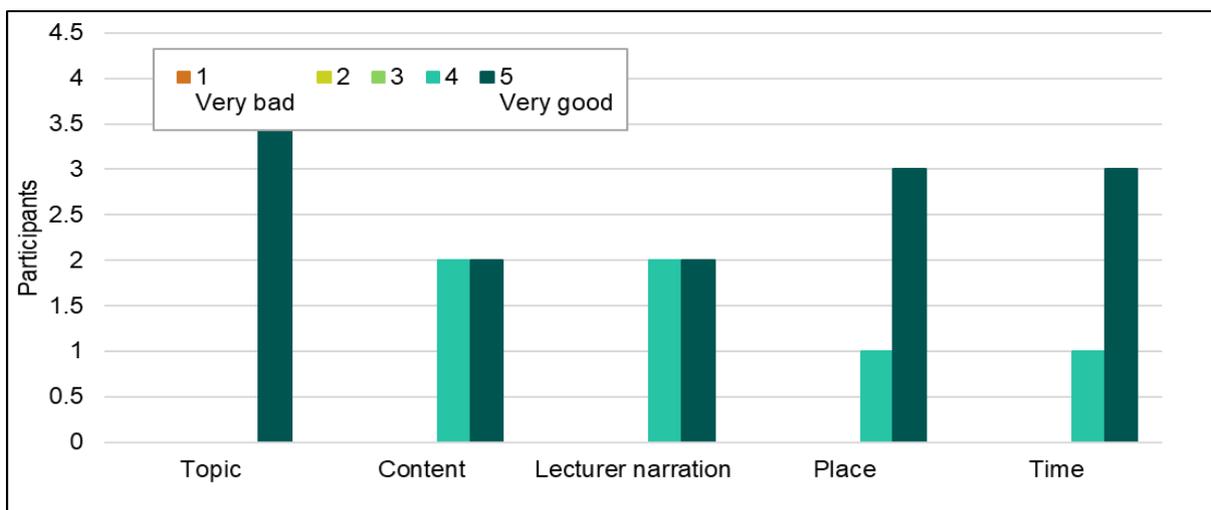


Figure 2 Students’ seminar evaluations conducted in June 2019

In comparison to Figure 1, Figure 2 emphasizes the students' ratings of 100% in the topic coverage, 90% in the content's details, 90% as the narrative of the lecturer, 97.5% in the venue of the seminar, and 97.5% in the time of the seminar. This is a significant improvement since the first time that the seminar was conducted. The students also wrote the following comments "It is interesting to learn from others' experiences, especially from a foreign lecturer", "Thanks for the seminar and it is a pity that there were only two sessions". The seminar's performance substantially improved as Michael applied the emotional intelligence by following the students' value orientations' path that lead to the implementation of new principles.

### **Emotional Intelligence, New Mini-courses and Seminars**

We can alternatively define emotional intelligence as the ability to interpret and assess others' emotions in order to make influential decisions that will guide to the effective primal leadership and new ideas. The domains of the Emotional Intelligence are outlined by the Gantt Chart, where the personal competence and the social competence are the primary domains; the self-awareness and the self-management are the sub-domains of the personal competence and the social-awareness relationship management are the sub-domains of the social competence (Bourne, Hanna, Solomon, Smith, & Sherwood, 2017). Emotional Intelligence is often interpreted as an emotional potential, emotional thinking, emotional consciousness, emotional competence, and emotional wisdom (Aleksandrova, 2009; Larina, 2016). N.P. Aleksandrova also mentions that "Emotional intelligence is not a predictor of success, although its presence can serve as a vital tool in achieving the specific results" (p. 73).

The Emotional Intelligence also directs us to our intuition and depicts the contrast between the easy choices and the right choices. Are the easy choices always the right choices? According to (Scott H. Young, Author, Programmer, and Entrepreneur), the hard choices emerge when a specific question has no unique answer or has no answers. According to (Kescia D. Gray, RN, MS, PHN, CHES, owner and the president of GrayKo Clinical Consultants), gathering the relevant information is the fundamental key to the effective decision making. On one hand, too much information can lead to confusion, may misguide us or prevent us from making a decision and following our intuition. On the contrary, relying on a single source of information can lead to inaccuracy, bias, misinterpretations and to severe consequences (Kescia D. Gray). How do we apply the emotional intelligence together with our intuition to obtain the balance between these two dilemmas? How do we find the alpine path that leads us to the summit?

Kescia D. Gray also recommends to take the following 5 steps prior to making a decision. *Identify the goal or problem.* What goal do we want to achieve? What problem do we need to solve? *Gather the information and weigh your options.* Seek diverse information and opinions and then filter or process the information. *Consider the consequences.* Review the advantages and the disadvantages of all the options. *Make the decision.* Implement the choice. *Evaluating the decision.* After you make the decision, expect the unexpected and be flexible to changes and revisions. We will experiences some problems and negative consequences after every decision we make. The fundamental key is to be flexible to the constructive thinking and apply the emotional intelligence for future improvements (Epstein, 1998; Goldman, 1995).

Psychologists and researchers often examine the emotional intelligence together with the connection of its influence on the leadership qualities and the performance. O.V. Belokon (Belokon, 2009) correlated the connection between the emotional intelligence and the business leadership: leaders with high emotional intelligence are capable of stimulating a positive atmosphere in the team and hence motivate the employees to perform their tasks successfully and efficiently.

A.I. Komarova, (Komarova, 2011), conducted cross-cultural studies and discovered a strong correlation between the values of the broader and the individual levels of achievement, benevolence and power (theory of S. Schwartz and V. Bolsky) together with vital fragments of the emotional intelligence such as understanding the management of emotions and the indicators of both the interpersonal and the intrapersonal emotional intelligence due to the cultural specificity.

The primary aim of this section is to apply the emotional intelligence and intuition to design new mini-courses and seminars that promote a positive learning environment and inspire students to learn. For instance, Aivars Vilkaste (director of Atrumlatvijas Tehnologiju Vidusskola in Rezekne, Latvia) offered Michael to conduct some type of a seminar or mini-course for the Academy's high school students. Michael taught a course on "Discrete Mathematics for Computer Science Electronics Engineering" at the Transportation and Sakaru Institute in Riga, Latvia during his spring 2016 sabbatical. The course primarily focused on the pattern recognition and the analysis of patterns. After successfully teaching his Discrete Mathematics course, Michael then decided to design a different version of this course for the high school students and named it "Introduction to Recognition of Patterns and Deciphering of Patterns".

The aim of this mini-course is to render how various patterns can be naturally discovered geometrically by arranging the geometrical configurations and provide the students hands-on practice problems and to write formulas that describe the patterns. During this four-day mini-course, the students get exposed

to rigorous hands-on practice problems that require vigilant observations of various details such as the types of patterns and how to transition from neighbour to neighbour of each pattern either by addition, multiplication, or by a recursive relation. In addition, the students gained experience in the recognition of piecewise patterns and how these patterns emerge naturally. Despite the fact that the students have seen some of these patterns prior to the mini-course, they did appreciate the depth of knowledge that they gained from the hands-on practice problems that focused on several details that they have not seen before. The students wrote very positive and supportive teaching evaluations and expressed their gratitude to Aivars Vilkašte. Michael and Aivars then decided to conduct this mini-course annually as it welcomed new perspectives for the students and prepares them to focus on meticulous details that they have not encountered before. Michael then decided to write a textbook on “Introduction to Pattern Recognition and Deciphering of Patterns” and plans to use it in the classroom while teaching his mini-course.

### **Primal Leadership and Innovations**

Transformational Leadership is defined as the leadership that influences positive change to followers and persuades follows to become leaders. On the contrary, Primal Leadership refers to the emotional dimension of leadership and is also the business application of “Emotional Intelligence”. The leader’s primal task is an emotional task – to articulate a message that resonates with its’ followers’ emotional reality, with their goals and to transition its’ followers in the positive direction. Primal Leadership is the art and science of arousing and focusing the strong positive emotions to the followers and focusing the energy in the specific direction that leads to the accomplishment of goals (Daniel Goldman).

A successful innovator must be a good leader and a good leader must be innovative (Huberman, 1983). A good innovator and leader must be flexible to constructive thinking (Epstein, 1998). Recall that the Primal Leadership focuses on the emotional dimension of leadership, where self-awareness is the most critical feature of the Emotional Intelligence as it lays the foundation for empathy and the remaining three domains. Self-awareness requires the ability to interpret one’s emotions, strengths, limitations, values and motives (Bourne, Hanna, Solomon, Smith, & Sherwood, 2017). H. Weissbach and W. Dax relate the principles of emotional intelligence together with respect, optimism, empathy, and the constructive, supportive and guided criticisms (Weissbach & Dax, 1998).

To apply the Primal Leadership together with the Emotional Intelligence to design new innovations and practices, it is especially vital to concentrate on the accuracy and the effectiveness of leadership that focuses on the values, strengths and outcomes. Therefore, prior to designing or introducing a new innovation or

teaching practice, it is pertinent to ask the following questions as shown in the diagram below:

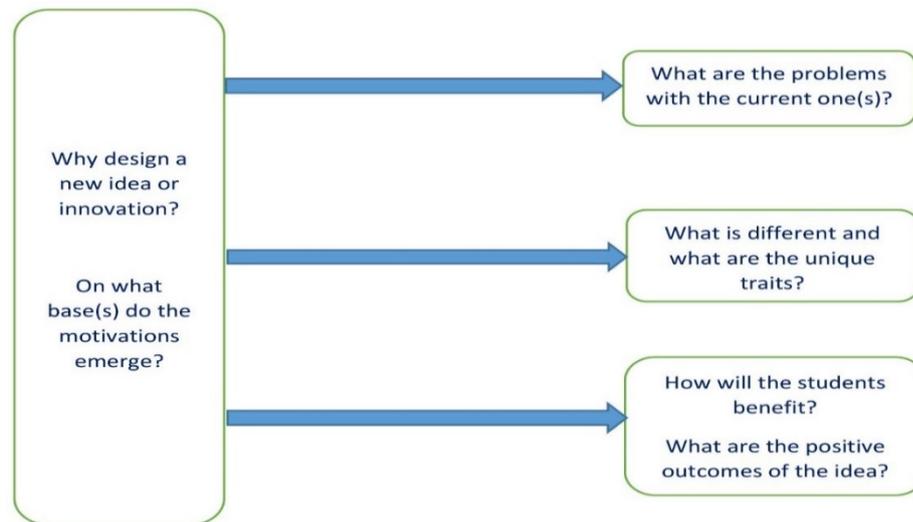


Figure 3 *Primal Leadership, design and related questions*

While designing a new innovation or practice it is pertinent to establish the base(s) of the motivations and to ask the following questions. *What is wrong with the current practice(s) and what problem(s) are we attempting to solve?* This question addresses the motivations to design and introduce a new innovation or practice. *What unique traits does it offer and render?* This question focuses on the uniqueness of the innovation and practice, the differences in comparison to the current ones and the new features. *How will the students benefit and what are the positive outcomes?* This question leads to the success of the idea, benefits and the positive outcomes. In addition, this is a really pertinent question to consider when asking: why should someone let us implement it? This becomes a vital point of presenting a strong argument in order to promote a new innovation or practice.

It is just as pertinent to apply the Primal Leadership together with the Emotional Intelligence while we are implementing a new innovation and practice. It is especially important to detect the rhythm, the students' progress, participation and the satisfaction during the implementation. The following diagram depicts these essential features to note and consider while introducing and implementing a new practice:

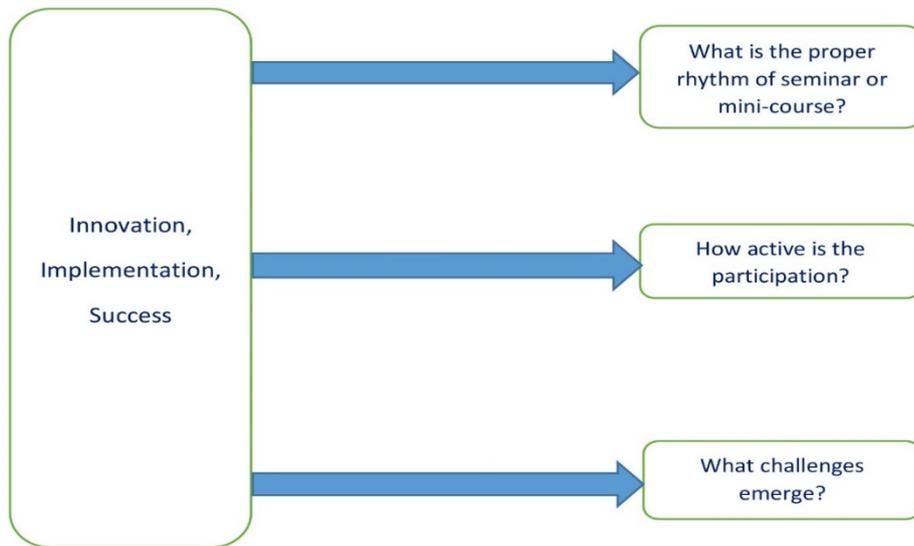


Figure 4 *Primal Leadership, implementation and related questions*

While implementing a new innovation or practice it is important to observe the following aspects and address the following related questions. *What is the proper rhythm or pace?* This question focuses on the students' preparation levels and how quickly can they grasp the new principles and coalesce them together with their base knowledge. *How active is the students' participation and do they find the seminar or the mini-course interesting and stimulating?* This is vital to observe in order to assess how appropriate are the content and the difficulty level. On one hand, if the level is too easy and simple, then the students may be bored and the participation will decline. On the other hand, if the level is too hard, then the students will not understand the content and lose the focus. It is essential to assess the intuitive balance and gradually increase the difficulty level. It is also vital to assess the rate at which the students are grasping the content too. *What challenges emerge?* We may implement a new practice successfully but never perfectly. For instance, the difficulty level maybe tough and we may transition slightly faster than the natural rate at which students are grasping the concepts. Second of all, the students may have seen the content before but may not be familiar with the symbols, terminology and the content's depth. These are the common problems that are likely to arise during our first implementation (Orlova & Radin, 2019). The important question to address is not whether the challenges will emerge, but how to handle the challenges effectively as they arise? This is where the emotional intelligence together with the intuition aid as crucial tools that guide in the right direction in assessing the students' value orientations and to the introduction of new themes and practices.

## Conclusions and Future Ideas

In the previous sections, we shared about various practices by carefully assessing the students' feedback and their value orientations and applying the emotional intelligence together with intuition and the Primal Leadership. These were only the first step of understanding how these three principles serve as a vital guide that lead us to new themes, ideas and practices. The next challenge consists of designing new themes, ideas and practices that relate to the new value orientations as they can change quite rapidly. How do we find the value orientations' and the emotional intelligence path that leads us to new themes, practices and innovations? That is the first challenging task in devising new goals. The next chore is to follow the path that leads us to the successful implementation of innovations and to the meticulous comprehensions of value orientations and emotional intelligence. The final step is to follow the path to future discoveries and innovations. This is where the future innovative journeys commence.

## Acknowledgements

In closing, we would like to take the opportunity to thank our colleagues and students at the Rezekne Technical Academy High School for their support with the new mini-courses that guided us to the new path of ideas and deeper understanding of the value orientations and the emotional intelligence. In addition, we would like to thank the Liepaja University Faculty of Arts and Humanities for their annual support with the Introduction to Photography course that guided to new teaching practices and to more detailed comprehension of students' value orientations and goals. Moreover, we would like to take the opportunity that thank the staff from the Riga Technical University Department of Engineering Economics and the Doctoral School for their support and thorough feedback.

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## PROMOTION OF SELF-CONFIDENCE OF A PROSPECTIVE MUSIC TEACHER AS A PERFORMER

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**Abstract.** *Self-confidence is a key factor that influences stage performance. To form a positive state while performing on the stage, self-confidence becomes the most important aspect, as it is one of the main guarantees of successful performing. However, in music teaching, many students lack self-confidence when performing, which in most cases hinders their performance results. The aim of the study is to reveal the peculiarities of promoting self-confidence of students as performers. A questionnaire and an interview with music education students were used to collect the data. The results of the questionnaire allow concluding that experience as a performer, physical and psychological preparation, and self-regulation are the three major factors influencing students' lack of confidence during the performance. Additionally, the responses from the interview indicated other equally prominent and influential factors such as performing environment, practice level and stage experience. Lastly, the interviewed students proposed ways to boost self-confidence, which include gaining more music knowledge and improving their music skills, practicing harder and applying self-regulation.*

**Keywords:** *music education, performance, self-confidence.*

### Introduction

Globalisation, digital technology development, considerable changes in social life, an increasing flow of information, invasion of massive culture into all the spheres of personal life have also had an influence on musical culture, the process of music education, professional activity of music teacher and teacher education in general.

The choice of the profession of music teacher is a relevant and complex process, which has influence of the whole life of a person. As it is well-known, young people encounter rather serious challenges making endeavour to find their solid place in the professional world of adults. Therefore acquisition of competences, learning, professional development make up important prerequisites for a young individual, who is eager to plan her/his own professional path. On the other hand, one's career does not necessarily have to be an outcome

of learning, competence acquisition and professional development. This also requires an active personal position and development of self-confidence. Successful professional activity of a teacher is predetermined by the individual's self-expression and compliance between the profession and personal interests or hobbies (Kirkpatrick & Mortimer, 2002). The successful professional expression of music teacher is closely interrelated with creating states on stage and on abilities to develop self-confidence.

According to X. Li (2014), as soon as an individual steps onto the stage, she or he must have the confidence because self-confidence is the prerequisite and foundation for success. Music education is an important part of art education, as it develops students' mental abilities and personality, evokes the pursuit of good things and inspires people to gain and share experience. However, sometimes it is not possible to achieve this due to the lack of self-confidence. R. Kirliauskienė (2018) confirms that for some personality types, emotional stress helps to mobilise their spiritual power, whereas others can change unrecognizably: a person may become tense, confused, the colour of her/his skin may change, hands may start trembling, which makes it hardly possible to perform in the best possible way. The profession of music teacher may also be regarded as a profession of increased emotional stress because one essential component - concert activity – naturally forms different degrees of psychological stress.

Music performance anxiety (MPA) affects mental states of amateurs, students and professional musicians (Paliaukienė, 2018; Constantin, 2017), as the goal of any musician is to achieve excellency in interpretation of a musical composition, in order to receive public's appreciation of his or her performance. Mental training can open the door to performer's inner creative energy flow that is concealed behind restricted patterns. Mental training exercises bring energy that can be canalized into the music and strengthen music performance, memory, creativity, attention and self-confidence. These exercises help to deal with stress and accumulation of adrenalin from traumatic performance experiences.

According to V. Kiik-Salupere (2013), the contemporary vocal pedagogy needs to deal with two major tasks: developing vocal skills of a student and increasing her/his awareness about how to cope with competitive environment and other possibly stressful situations during performance. These two issues are closely entwined and interdependent. The singing voice is a part of a person who is to "play upon it", and therefore the psychological state of a singer can have the most profound and direct effect on the quality of the emerging sound. The study revealed some factors of concern to singing students of all groups: keeping the voice in good condition, memorizing lyrics and making a good impression during actual performance. Factors having a negative effect on singing were as follows: bad mood, unfavourable conditions and being in a hurry.

Furthermore, H. Spielman (2009) states that a crucial factor for development of self-confidence is the practice of positive thinking, which is also an important factor which helps with performing under pressure. She adds that it is not advisable to expect perfection because live performance always brings risks. The ability to respond to the interpretive elements of the composition in order to express its emotional character means going beyond correctness. This is a precious skill and when a performer has it, it is immediately noticeable to any listener. Traditional teaching has not always excelled in this area. Describing emotional importance to students, even with the most compelling words, does not necessarily help them to make authentic connections. The ability to conceptualize and transfer musical ideas defines the perfect students.

According to A. Kruglanski (2000), individual vocal expression in music education is a significant fact contributing to prospective teachers' emotional, spiritual and intellectual perfection. The findings suggest that the individual vocal expression has a significant impact on the future teachers' personal competence. It is important to underline that the individual vocal expression strongly influences creativity, self-confidence, emotionality and skills of achieving the goal. J. Lane (2004) states that correlation results indicated significant relationships between self-efficacy and self-esteem. Multiple regression results revealed that self-efficacy mediated the relationship between performance accomplishments and academic performance. According to B. Ford (2013), live performance is seen as a crucial part of being a professional musician and a performer's comfort in front of an audience often determines the success, failure or longevity of a career.

The scholars, who have thoroughly researched the subject of musical performance, refer to it as a skilled activity performed under intense pressure, thus often seen as a profound source of anxiety (Wells, 2012; Kirliauskienė, 2018; Kruglanski, 2000; Lane, 2004; Bostic, 2018; Li, 2014; Su, 2011; Tan, 2005; Susan, 2010; Li, 2009; Sun, 2003; Li, 2007). Therefore, the answer to the question how to encourage the development of students' self-confidence during performance to achieve good results is of utmost importance. *The aim of the study* is to reveal the peculiarities of promoting self-confidence of students as performers.

## Methodology

The research was done applying several *methods*: scientific literature analysis, semi-structured interview, questionnaire survey, quantitative and qualitative analysis of collected data.

A specially designed questionnaire consisting of questions about the factors that have influence on development of self-confidence was used in the research. The questionnaire included 35 statements (factors) and the respondents were requested to respond to them indicating whether the factor was highly significant,

significant or not highly significant. Revealing the students' attitude towards development of self-confidence on the stage, a semi-structured interview was employed. The interview consisted of open-ended questions about the peculiarities of developing self-confidence of a student as a performer. Open-ended questions encouraged students to provide more-detailed responses, which were not restricted by the specific variants for answers. The interview also focused on subjective opinion of participants in the interview. Different methods for processing the data were chosen seeking to better reveal factors that promote self-confidence of prospective music teachers as performers.

The conducted empirical research included a questionnaire and an interview (Žydžiūnaitė & Sabaliauskas, 2017; Kardelis, 2016; Langkos, 2014). Two hundred prospective music teachers participated in the questionnaire survey. There were 167 students from bachelor's degree programmes, 30 respondents from master's degree studies and 3 doctoral students. 10 students who study music education participated in the interview. All of 10 prospective music teachers reflected on the concept of self-confidence and improving self-confidence when performing on the stage. All the responses were grouped into categories and subcategories as well as supported by example quotes.

## **Results and discussion**

The first part of the research employs a questionnaire, in which prospective music teachers responded to the questions related to their self-confidence and personal experiences while performing or preparing to perform on the stage.

Firstly, music education students answered the questions about the moments in their personal experience when they lacked self-confidence on the stage and what emotional reactions they went through. The following answers were provided: anxiety, low mood, trying to find ways to comfort themselves, overthinking, mind going blank, being unable to concentrate, complaining and blaming others. These results show that when music education students performed on the stage, most of them were able to control their emotions well: only 33 percent of the respondents felt constant anxiety, 13 percent had negative experiences, 26 percent could not stop thinking too much, 14 percent were feeling depressed and 23 percent were unable to focus. This proved that students were able to master their psychological state, to properly deal with the mistakes during the performance process and handle them calmly. Nevertheless, due to various reasons some students were not confident and had psychological issues, which lead to frequent fumbles and mistakes on the stage, as they could not deal with the aftermath well. Therefore, in the normal learning process, teachers should cultivate students' self-confidence, teamwork, and adaptability.

Secondly, the students indicated the following factors which affect performers' self-confidence: self-regulation, physical function, physical and mental preparation, training status, experience accumulation, teacher's leadership, environmental and social factors. The results show that the majority of the respondents regard their experience as a performer (75 percent), their physical and psychological preparation (69 percent), and self-regulation (68 percent) as the most important factors that affect their confidence when performing. Thus, in order to promote self-confidence, they should be at the centre of attention. The results suggest that during the normal teaching process, teachers should teach students in accordance with their aptitude, the characteristics of each student, choose the repertoire suitable for the learners, and should not blindly choose the repertoire that is too difficult. Moreover, students should often be urged to practice carefully and follow suitable examples.

Furthermore, the participants were asked about the significance of certain factors to their self-confidence. Understanding of the lyrics content of musical pieces that the students were required to learn was among the popular answers with the majority of the students (46 percent) claiming that it played an important role in their self-confidence as performers. Similarly, the perception of the emotions of musical works was pointed out by the most of the respondents. The prospective music teachers also thought that their ability to comprehend the emotional content of the musical pieces they were learning in vocal music class was closely linked to them being confident when performing (47 percent). Interestingly, checking clothes, musical instruments, lights and venues before the show gathered mixed opinions as the majority of the students (45 percent) claimed that they did not have a clear opinion on whether this affected their self-confidence during performances. However, a significant number of the respondents (41 percent) did state that this was an important factor, which seems reasonable, as making sure that everything is in the right place and working well might raise their self-confidence levels. The usage of the imagination on the stage during the performance was also chosen as important by many respondents (39%), although the majority (46 percent) did not see the link between their confidence and the use of imagination. Nevertheless, it can be justified as a significant factor for students who find it helpful to imagine certain scenes in accordance to what they are singing and immersing themselves into the performance, consequently banishing the nerves and becoming more confident during the actual performance.

Moreover, using physical movements and body language during the performance was selected as yet another crucial factor by most of the respondents (48 percent) as well as the regulation of emotions during unsuccessful performances (47 percent). It is evident that the students' coping mechanisms during their performance are to use body language in order to appear – and in turn feel – more confident, and if all else fails, employing self-regulation techniques if

it becomes evident that the performance is lacking. It is vital for the students to know that during the performance, there will be a variety of errors due to emotional fluctuations and learning how to properly deal with these mistakes in performance is a necessary skill for every performer. As for what happens after the performance, music education students list asking opinion from the teacher and peers after the performance and watching the video or recording of the performance summing up the advantages and disadvantages. An overwhelming number of respondents (52 percent and 54 percent respectively) claim that this helps: every performance is the accumulation of experience and the training of techniques, and after the performance, if the student communicates with the teacher more, she or he corrects the mistakes in time for the performance and improve the performance's quality. Listening to other students' advice, learners will be able to learn more from each other (Constantin, 2017).

Lastly, the respondents claim that being fully prepared for the performance in advance is very important (67 percent) in order to be a self-confident performer. Preparation includes mental preparation and physical preparation. Preliminary performance preparation includes: program selection, program practice, program costume, lighting design and more. Every performer should be fully prepared to stand confidently in the centre of the stage to bring the best visual and auditory sensations to the audience (Kirliauskienė, 2018; Livosky, Stevens, Holl, & Surawski, 2012). The teacher should be well prepared for the music show as well. The preparation of the teacher includes memorizing music scores, warming up activities and self-regulating mental attitude. Teachers should be aware of how to prevent bigger errors during the performance as well as provide a rather relaxed playing mood which corresponds and matches with the current level of the performer.

The second part of the research is an interview with music education students, which was conducted to find out their opinions about self-confidence, the abilities of a successful performer, the reasons leading to the lack of self-confidence, and suggestions as to how performers could improve in terms of being confident when performing on stage.

Firstly, Table 1 reveals the prospective music teachers' opinions on self-confidence. The respondents were asked how they understand the concept of self-confidence and were requested to define it.

Table 1 discloses three different definitions of confidence. Some interviewees think that self-confidence is a kind of external expression – whether you are not afraid to be yourself and make mistakes in order to learn. Some of the students think that self-confidence is a positive state – being psychologically well and feeling good about yourself, while others believe that self-confidence is a kind of self-awareness, which is the way one presents herself or himself to others and believes in her/his own abilities.

**Table 1 The Opinions of Interviewee on Self-Confidence**

Category	Sub-category	Example of quotes
<b>Self-confidence</b>	The external expressions	<i>Confidence is an expression of one's ability or knowledge. When you are sure about something, you will be fearless. Being confident means not being afraid to show yourself, not being afraid to make mistakes.</i>
	Positive state	<i>Is a kind of positive state, sometimes it makes me calm, but also makes me excited. Allows people to feel good.</i>
	Self-awareness	<i>Believing in yourself, believing that you can do anything. Being sure about the way you look and the way you dress. Is an affirmation of one's own.</i>

According to V. Kiik-Salupere (2013), confidence is a good emotion and it is necessary for success. Confidence is contextualized within domain-specific and person-specific self-views. Not everybody has a strong heart and will. Not everyone is a superman. Studying music is a lonely and hard road to follow. If students lack self-confidence, this can bring about many errors in further musical development. Therefore, students must live, learn and act with confidence in order to become confident performers.

In the next stage of the research, the different views of music education students about the reasons leading to their lack of confidence on stage are presented (Table 2).

**Table 2 The Reasons Leading to the Lack of Confidence: Interviewees' Opinion**

Category	Sub-category	Example of quotes
<b>Causes of low self-confidence</b>	Performing environment	<i>Different environments, different audiences, and judges will affect my confidence. If the environment of a performance is unfamiliar to me, my confidence will be very low. If the instruments or equipment at the venue make me uncomfortable, I get nervous.</i>
	The physical and psychological preparation	<i>I feel nervous and lack confidence when my performance is poorly prepared. When I play while not feeling well, I don't have confidence.</i>
	Training status	<i>I have no confidence in myself when I perform without having practiced enough. I think I have no confidence at the times when I didn't practice well.</i>
	Stage experience	<i>When I first performed on stage, I didn't have much confidence. If there is no rehearsal before the performance, I will feel unconfident or nervous. I think the main reason for my lack of confidence on stage is that I have little stage experience.</i>

Table 2 shows different causes for low self-confidence of music education students. Four main reasons why they felt nervous on stage were identified among the participants' responses: performing environment, the physical and psychological preparation, training status, and stage experience.

Different performance environments, stages, audience, musical instruments and such, affect the self-confidence of performers. If a performer is required to perform in an unknown environment, it will always cause some nervous reaction because they are unfamiliar with their surroundings. The same can be said about the audience – it is a known fact that some audiences can be very perceptive and supportive, while others can turn out to be passive and critical, thus affecting the performer in different ways. Physical factors also play a role: when the person's body feels uncomfortable, she or he may have no confidence to perform. However, according to the participants, the main reason for performers not to feel confident on stage is when they are not fully prepared. For example, if a singer performs on stage without memorizing the lyrics, it is simply impossible to be feeling very confident because they are bound to make mistakes and feel embarrassed. Similarly, lack of stage experience can result in insufficient self-confidence. To conclude, when the reasons behind what makes music education students feel insecure or nervous on stage are clear, it becomes easier to find ways to overcome these problems and help them become confident performers on the stage (Ford, 2013; Cabedo-Mas & Diaz-Gomez, 2013).

Table 3 below highlights the answers of the prospective teachers regarding the abilities of a self-confident performer.

*Table 3 The Abilities of a Self-Confident Performer: Interviewees' Opinion*

Category	Sub-category	Situations
<b>The ability of a confident performer</b>	Ability of expression	<i>Confidence makes performers better on the stage. A confident performer is able to better demonstrate what they want to say, what they want to show to the audience by their singing.</i>
	Leadership	<i>A confident performer is like the boss of a company who can lead his employees. If you are confident on the stage, you can influence other performers to perform better.</i>
	Communication ability	<i>They know how to keep eye contact, verbal contact with the audience. Confident performers are always able to interact with the audience in appropriate situations.</i>

The prospective music teachers were asked to describe what qualities make a confident performer, and their opinions can be divided into three categories: ability of expression, leadership and communication. Firstly, the respondents

simply state that having confidence means that a performer is able to perform better on stage, or, in a more nuanced answer, they claim that confident performers are good at expressing emotions through their singing – when nerves and stage-fright are not at the forefront of a performer’s mind, she/he is able to focus on emotional expression and deliver a high-quality performance for the audience. Other students suggest that confidence is closely linked to leadership. If a performance is made up of many people, a confident performer takes the leading role, as it can inspire others to do their best by following their lead. Lastly, a very important characteristic of a confident performer is the ability to communicate. Since the main goal of any performer is to reach the audience and send them a meaningful message with their performance, according to the respondents, confidence allows an individual to keep eye contact and verbal contact with the listeners, and interact appropriately and in a meaningful way (Bostic, 2018; Corrigan, Schellenberg, & Misura, 2013).

Lastly, the interviewees were asked to think of the means they tend to use to boost their self-confidence on the stage (Table 4).

*Table 4 Increasing Self-Confidence on the Stage: Interviewees’ Opinion*

Category	Sub-category	Situations
<b>Increasing confidence</b>	Learn more about music knowledge and music skills	<i>If I feel nervous, I think the reason is I did not exercise enough on my instrument, so the logical solution is to practice more. I do not have enough knowledge about performing; maybe learning more would help me become more confident on stage. Gaining more knowledge and skills is the best way to improve your confidence on the stage.</i>
	Practice harder	<i>Music is difficult, if I want to be successful on the stage, I need more time and practice. You need to practice every day, same as you eat every day. Constant practice is constant growth in self-confidence.</i>
	Self-suggestion	<i>I used to say to myself before a show, “You can do it! You're the best! Fake it till you make it.</i>

Table 4 illustrates the different ways that according to the interviewed students would help to boost their self-confidence when performing on stage.

First, according to the respondents, it is important to gain more music knowledge and exercise music skills, because the more the students understand the subject and the higher their skill levels are, the more confident they should become while performing on stage. Secondly, the interviewed prospective music teachers stress that practicing hard is beneficial in order to increase confidence,

since, as previously indicated, many issues with self-confidence arise from not being fully prepared for the performance. The students are aware that hard practice can help them become more confident when performing because this is the most effective way of ensuring absence of mistakes on stage. Lastly, students think that in order to be more confident on stage, it is necessary to employ self-suggestion – believing in oneself and practicing positive thinking could override harsh self-critique, judgement from oneself or others and help immensely in boosting self-confidence during the actual performances on stage.

## **Conclusions**

Self-confidence is a key factor influencing stage performance. It is one of the main guarantees of a successful performance. The most important factor in creating a positive state of mind on stage is self-confidence – excellent technical and artistic repertoire preparation, stage experience, musical abilities and skills, personal qualities and emotional control, as well as positive attitude are vital in order to achieve that proper state of mind.

The results of the research suggest that prospective music teachers feel very anxious when they lack confidence: some students have low mood when they lack self-confidence, their brain stops thinking, they feel depressed, are unable to concentrate, hesitate of what is right and wrong, complain and blame others. Therefore, in the daily learning process, teachers should cultivate students' self-confidence, teamwork, and adaptability. Moreover, according to the responses obtained using the questionnaire, there are different factors affecting the confidence of performers: self-regulation, physical function, physical and psychological preparation, training status, experience accumulation, teacher's leadership, environment and social support. Being aware of these factors, it is easier to enable music education students to enhance their self-confidence.

The interview revealed the factors influencing self-confidence of students as performers, and they are as follows: external expressions, positive state, self-awareness, ability of expression, leadership and communication abilities. The reasons leading to the lack of self-confidence are as follows: performing environment, physical and psychological preparation, amount of practice done before the performance and stage experience. Moreover, the research disclosed the students' suggestions on how to increase self-confidence on stage. Students should accumulate more music knowledge and improve their music skills. They should also allocate more time to efficient practicing.

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## FEATURES OF THE USE OF EMOJIA IN THE STUDY OF HUMANITARIAN DISCIPLINES AT THE EXAMPLE OF HISTORY

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**Abstract.** *This article deals with the potential to use emoji in the studying process. The purpose of the article is a determination of the potential for use of emoji in the educational process as a partial substitute of the traditional text. There were used the following methods to solve the desired goal: the analysis of the scientific works regarding the matters under the inquiry, synthesis of ideas; generalization of the own pedagogical experience; method for description of the interactive forms of teaching during seminars and lessons in secondary school. The author of this article created the algorithm to use emoji in the history classes at school and university. According to the results of poll among pupils and students emoji is more popular in secondary school. During the classes emoji can be used in various ways: partial emoji translation of the text; emoji testing; quest; using emoji in literary Internet projects. Using emoji has methodical, psychological and technical advantages such as the decrease of the volume of the educational material; the increase of the emotional interest of pupils and students; the development of the logical and associative thinking; conducting classes by dint of smartphones and messengers; distance learning. Using emoji in the studying process engages not only innovation technologies, but also higher nervous system of person, the language of symbolic logic.*

**Keywords:** *educational process, emoji, informational technologies, pedagogy*

### Introduction

Society and economy reckon on highly competent people while competence requirements are changing; not only good basic skills (literacy, numeracy and basic digital skills) and civic competences; skills such as critical thinking, initiative taking and problem solving, creativity play an increasing role in coping with complexity and change in today's society. The development of

informational technologies promotes the transformation of education: a diversity of study, simplification of a procedure for receiving of the necessary information, its processing. Competences are not static; they change across generations and throughout life. It is more important convince that all people of different ages have the opportunity to get the better of the required competences in initial education and training, higher education or different forms of non-formal and informal learning. The use in the educational process of the computer and internet generated: presentations, electronic textbooks, online-trainings. Extending to the educational process, technical progress, it produces more and more new approaches, influencing the foundations of our thinking. In the previous publication “Graphical interface as a didactic component of an electronic text-book” (Romanukha, 2018) it was a question about the importance of transformation of principles for composition of electronic text-books and the influence of the informational technologies on the change of people’s thoughts, principles of data processing, especially among the youth. Continuing the development of the problem, it is proposed to pay attention to the matters of integration of languages of a human and a machine within the boundaries of the information space. As modern technologies bring together thinking, speech, the principles of information perception of a human with a machine, it increases the need to update the principles of work with text as the main source for saving and transferring of information.

The use of text in the educational process is dominant till the present time. The receiving of new information, communication through the electronic mails, messengers and other communicators are also based on the text. The super saturation of the text in people’s life decreased its interest to reading and promoted the transfer to the simpler forms of communication - smiles, emoji. Their appearance was rapidly changing the world around, and the use reflected in many aspects was reflected in many aspects of human existence: personal life; literature; communication; art, cinema; marketing and so on. Today, emoji is one of the unofficial, but widespread electronic languages of communication, which are used in many countries of the world with different religions, languages, culture.

It is only the beginning of the use of emoji in education. Now the only country that has declared its intention to allow officially emoji in the educational process at the level of kindergartens is Australia. The teachers held that their use is quite argued and well-timed. Thanks to their brightness and unusualness, they are able to capture and attract attention of children with different motivations. The use of smiles allows to estimate and to transfer faster an information than with usual language or text. The smiles save time on encoding and decoding of information, as it is more recognizable. The advantage of using of smiles and

emoji lies in the direction of inclusive education aimed at children with certain developmental disadvantages.

The purpose of the article is a determination of the potential for use of emoji in the educational process as a partial substitute of the traditional text.

There were used the following methods to solve the desired goal: the analysis of the scientific works regarding the matters under the inquiry, synthesis of ideas; generalization of the own pedagogical experience; method for description of the interactive forms of teaching during seminars and lessons in secondary school.

We have studied using of emoji in educational process of Donetsk National University of Economics and trade named after Mykhailo Tugan-Baranovsky in Kryvyi Rih city (60 persons, among them were students from specialty Philology, who study some themes from History in English and students from other specialties with sufficient level of knowing English) and Kryvyi Rih secondary school No.10 (50 persons). During the classes emoji can be used in various ways: partial emoji translation of the text; emoji testing; quest; using emoji in literary Internet projects. According to the results of poll among pupils and students emoji is more popular in secondary school.

### **Historical Development of Emoji**

A study of this question is reflected in a number of publications. Emoji, as a means of nonverbal youth communication, was studied by O. Dubrovskaya. The author emphasizes that an informatization leads to the fact that the Emoticons, being used for thought-transfer, become as a full-fledged replacement of words and letters (Dubrovskaya, 2016). The scientists K. Osadcha and H. Chemerys emphasize the importance of use of symbols in analysis of instrumentarium for prototyping of a program interface (Osadcha & Chemerys, 2018). A positive result for use namely of emoji in the educational process was emphasized by the teacher Marissa King (Marissa, 2018). She thinks, that gives a better understanding of those fact that a lot of in the verbal speech also depends on context. H. Ukhanaieva speaks about emoji as a new language of the virtual space, which is actively spreading around the world (Ukhanaieva, 2018). O. Kitova agrees with such conclusions (Kitova, 2016). She argues that emoji and emoticons perform an orienting function in communication and they dominate in the certain communities.

The emoji language appeared in Japan at the end of the XX century. Firstly, it was a language of ideograms and smiles, which were used on the web-pages and in the electronic messages. However, soon it captivated all the world. As the result, it was firstly officially placed an announcement for a vacancy of translator of smiles (emoji) in 2016 in London. A pictogram communication is





The directions and spheres for the practical use of emoji are enough wide. They are already widespread in the form of educational content. The company General Electric on [emojiscience.com](http://emojiscience.com) placed a table of experiments in the view of periodic table, where all information was encoded in emoji. It was necessary for the user to push on the certain smile to watch an experiment (Kane, 2018). If you wished to see a rocket firing, it was necessary to push on the image of a rocket (Fig. 2).

A wide spreading of emoji was in marketing. All modern advertisement on the basis of messengers and Internet is built only on emoji (See figure 3).

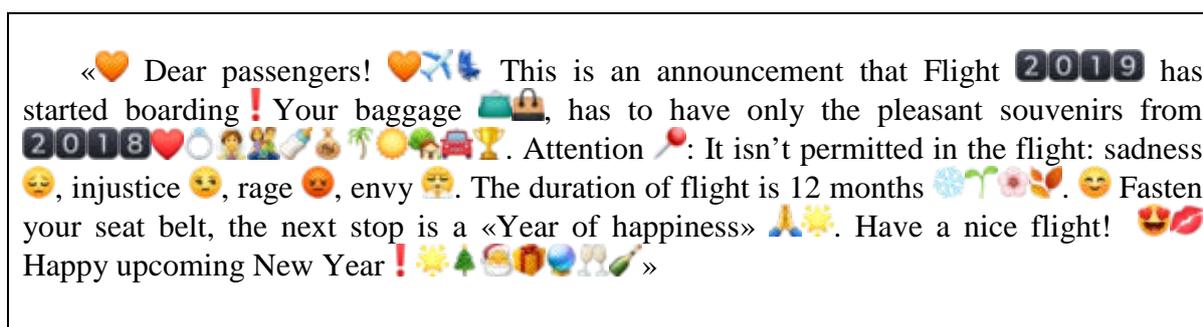


Figure 3 Example of emoji-advertisement of travel company, which is sent to its clients through Viber

The borrowing of the principles and methods for use of emoji in various fields opens the wide opportunities for their implementation in the educational process. The poll, published on the website Dictionary.com, found that, 37 percent of teachers use emoji, gifs and memes on their lessons. In such a way teachers try to make the educational material more interesting and to attract the attention of teenagers. Most often they are used on lessons in secondary school - 44 percent of teachers use them there. In college and university, they are used by 33 percent of teachers, and only by 29 percent in elementary school (Kondratieva, 2018). The directions for use: motivation; designation of subject; distribution of roles during team working; emotional accompaniment and etc.

The consideration of current trends and forms for use of emoji promoted the development of the emoji-oriented complex of knowledge. The author foreseen a wide use of emoji in different forms of works: from the text to the execution of exercises for consolidation of learned material, examination of acquired knowledge:

- Reading of the text with elements of emoji;
- historical emoji mathematics. A group of emoji + other group of emoji = event which should be indicated;
- to put in a missed word – emoji;

- open task to recode text in emoji. Rewriting of letters from the past;
- quizzes – varieties of guessing games.

The technical means for realization of assigned tasks became messengers in the mobile devices. Let's look at certain types of work in more details. “The reading of text with elements of emoji”, the advantage of the offered method consists in: reduction of material volume in saving of the semantic load; the interest of work with text; originality of material presentation; easiness of remembering and associations setup; creative thinking; awakening of motivation to the associative thinking; the disappearance of the problem of student’s distraction on the phone. The experiment showed that the correlation of emoji with text has to be not more than 30/70% depending on the topic and complexity of the text.

The optimal index is – 20/80%. A huge oversaturation with emoji leads to complication to understand the sense and to the loss of interest. An increase of the percentage of emoji is possible upon condition of their systematic addition, taking into account the individual abilities and possibilities of the students. Herewith, the work with text has to be based on the principle of clear definition of the meaning emoji and on the further permanence of their role. The emoji have not to be applied to names, surnames, terms (Table 1).

*Table 1 A comparative table of texts with and without use of emoji*

MERE TEXT	TEXT WITH USE OF EMOJI
<p>In May 1803, the First Consul directed the French Army to Weser, to capture the belonging to the King of England Hannover; in June the electorate was already under the reign of France as a result of cowardice of the local authority, which hurried to conclude with the First Consul an agreement, according to which the French Army could occupy all country to the territory of Elba, and the Army of Hannover had to be dismissed. On May 18, 1804 Napoleon was acclaimed as emperor of Frenchmen – Napoleon the I<sup>st</sup>. He began to regroup the forces on the north of France (in the Boulogne camp) to organize the forcing of the English Channel and to land the army’s expedition in the Great Britain. The worried with it Englishmen began an active diplomatic activity for creation of a new coalition against Napoleon I. The Russian Empire concluded with Great Britain the St.</p>	<p>In May 1803 the 🇫🇷👤👤👤 Consul directed the 🇫🇷👤👤👤👤👤👤👤 Weser, to Weser, to capture the 🇬🇧👤👤👤 Hannover, which was under the 🇬🇧👑; in June the electorate was already under the reign of 🇫🇷👑 as a result of 🇫🇷👤👤👤 of the local authority, which hurried to 🇫🇷👤👤👤 with the 🇫🇷👤👤👤 Consul an agreement, according to which the 🇫🇷👤👤👤👤👤 could occupy all country to the territory of Elba, and the 🇬🇧👤👤👤 of Hannover had to be dismissed. On May 18, 1804 Napoleon was acclaimed as 🇫🇷👑 – Napoleon the I<sup>st</sup>. He began to regroup the 🇫🇷👤👤👤 on the north of 🇫🇷👤👤👤 (in the Boulogne camp) to 🇬🇧👤👤👤👤👤👤 of the English Channel and to land of 🇬🇧👤👤👤 in 🇬🇧👤👤👤. The worried with it 🇬🇧👤👤👤👤 an active diplomatic 🇫🇷👤👤👤 for creation of a new coalition against Napoleon I. The 🇫🇷👤👤👤👤👤👤👤👤 the St. Petersburg’s Treaty of Alliance in 1805, which laid the foundation</p>

<p>Petersburg's Treaty of Alliance in 1805, which laid the foundation of the 3<sup>rd</sup> anti-French coalition. In the Trafalgar fight in 1805, the united Franco-Spanish naval forces had the worse from the British squadron under the command of admiral G. Nelson. It broke the plans of Frenchmen by invasion in the Great Britain.</p>	<p>of the 3<sup>rd</sup> coalition. In the Trafalgar in 1805, the united Franco-Spanish had the worse from the G. Nelson. It broke the plans of Frenchmen by invasion in the Great Britain.</p>
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We use this type of work when conducting seminars on the subject "History of Ukrainian Statehood and Culture" and in the course of teaching "World History" in a comprehensive school. This text is offered as a template for creating your own text with elements of a discipline topic. 70% of students are interested in this type of work. Creating your own text with elements of emoji is closely related to the self-realization and level of media literacy, and between the self-actualization of the individual and his level of media competence, and is one of the important trends of modern humanities. The results of our own experience are described in more detail below.

The following example is a historical emoji mathematics. Its use is appropriate after insight into the theme's material. She will help for the better remembering of events, personalias, facts. Such format for material consolidation can be presented in the form of popular game – quiz. It is given to a participant a set of emoji, and he/she has to guess an event, person or name. As a help, you can give an informational resource [zaxid.net](http://zaxid.net) which proposes to print the meaning of emoji and to indicate about which famous Ukrainian it is talked about (Table 2) (All on emoji. Festive test of Ukrainians in emoticons and symbols, 2018).

Table 2 A comparative table of task for consolidation of the studied material: emoji-quiz; emoji mathematics; to put in a missing word

<p>Начнём с простого. Чья это биография?</p>  <p>Ваш вариант:</p> <p><b>Отгадать</b></p>	<ol style="list-style-type: none"> <li>1. Indicate a name of the fight   + 1805 = Trafalgar fight</li> <li>2. Indicate a name of the treaty   + 1805 = St. Petersburg's Treaty of Alliance</li> <li>3. To fit the omitted world                  In May 1803 ___ Consul directed the _____ to Weser, to capture the belonging to _____ Hannover, which was under the _____; in June the electorate was already under the _____</li> </ol>
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The use of emoji expands the psychological, methodological, technical teacher's tools. In the context of informatization, they give a possibility not to separate the study from the reality, the peculiarities of youth communication. A sign, a symbol is always perceived more positively and better than just the text. A symbol attracts attention, makes the text more interesting, activates thinking, imagination. In the study of history it is very important, as the teacher's task is not only to transfer the knowledge, but to form a critical thinking, an image. At the same time, a symbol helps to a person to perceive a sensation, which are transferred without any contact, to include own experience and emotions in seconds. To understand an emotional orientation of the text, it is enough to look at a symbol, but not to read several pages. The scientists explain the success of emoji with their closeness to a unified ancient language. According to Zimmer Frensis, there is an old utopian ideal - the universal illustrative speech. It is often compared with a language of pre-Babylonian times. The scientist himself was actively developing similar characters in the 50s of the XX century. He explained the preconditions of such actions as natural – return to the basics, primary sources.

Herewith, it should be expressly understood that the oversaturation of text with emoji, the lack of clear regulations for their use will lead to the loss of the text's essence, its incomprehensibility, negative attitude to the subject, and learning in general. The principle of replacement of words with emoji works only with short sentences, which have a lack of their own names. As showed the results of research, the percent of replacement of words with emoji, in average, has to be no more than 30%. An expansion in a number of emoji leads proportionally to the strengthening of complexity in text understanding. Therefore, the main message of emoji is not so much to replace the words, texts, as to make them more interesting and simple for study. A reason for a clear percentage of emoji in the text lies in the fundamental difference of ideograms and pictograms. The ideogram is read in a natural verbal way, and the elements of ideographic writing are essentially words, speech signs. A pictogram is an image, which can be interpreted in many ways. It can be interpreted as a verb, as a noun, and as an adverb. More simply this is an idea, which is able to accept various verbal expressions. For example, if you draw a bus, then it can mean “bus”, and to “go by bus”, and something else related to the bus.

### **Research results**

The efficiency of use of emoji in the educational process is witnessed by the experiment's results. It was conducted among: the students of the first course of Donetsk National University of Economics and trade named after Mykhailo Tugan-Baranovsky in Kryvyi Rih city (60 persons), the pupils of Kryvyi Rih

secondary school No.10 (50 persons). Such choice was made to indicate the age, status and informational features for emoji use. The results of approbation in the University showed 70% of desire to work with the texts containing emoji while the pupils from schools on the contrary showed 95% of desire. Such difference should be explained with a difference in educational programs of the university and school, professional orientation, statusness of pupils of educational institutions of a certain age. The students perceived more positively the practical tasks with the use of emoji: testing, quizzes, - as one of the alternative forms for check of learned material, study and rest in a game form. The use of emoji had a positive effect in the growth of success of the experiment's participants (in average on 20%), faster and better material assimilation, time saving. During the inquiry of the audience regarding the convenience of use of this development on a 5-point scale, where 1 is a lack of understanding and perception, and 5 is a complete understanding and perception, we obtained the following results: 1 - 0%; 2 - 20%; 3 - 30%; 4 - 32%; 5 - 68%. The survey findings witness about complete perception of the audience development.

### **Conclusions and perspectives of further researches**

So, the use of emoji in the educational process is an evidence for efficiency as from methodical, as from the technical point of view. The informational progress brings in our life corrections, changes not only the thinking, but also the means of communication, language of communication. The growth of volume of the informational flows created emoji, which became as a symbol of communication of the XXI century. A rapid expansion of emoji in different spheres of common life showed not only an efficiency and usefulness of their use, but also a possibility for their application in education. The recoding of educational texts with the use of emoji significantly reduces the amount of educational material, decreases the volume of educational material, decreases a load on the course participant. The emoji language awakens interest, activates the activity of the least active listeners, activates logical and associative thinking, promotes the formation of creativity. The practical tasks (based on the game form) indicate not only the wide variation of the forms of knowledge control, but also an increase in organized nature of the students, their interest in work. On the technical side, the use of smartphones, tablets, computers, opens an access to the study of material in any time and in any place, it solves one of the problems of most modern Ukrainian schools - distraction of a student on a smartphone during a class.

The realization of described model in the technical aspect is possible with the use of modern messengers: Viber, WhatsApp, Facebook Messenger, Skype. They allow you to use emoji in work and at the same time be a platform for the

study of material, work in chat etc. The use of the wide set of emoji is possible thanks to free information resources of companies: Google, Aple, Google Drive, Emoji Keyboard Plug, etc.

The directions for future research lies in the use of emoji in the other disciplines, the extension of forms and methods for lessons realization, development of distance study, analysis of psychological mechanisms of influence on the listener, an activation of logical and associative thinking.

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# FINNISH PRIMARY AND PRESCHOOL TEACHERS REFLECTING ON GENERIC SKILLS: HELSINKI UNIVERSITY GRADUATES' PERCEPTIONS

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**Abstract.** *Lately there has been much interest in how university level studies develop students' generic skills and to what extent university education meets the requirements of working life. Generic skills are needed in every profession and field. The term has been widely used during the past few decades due to the rapid change in society and working life. In order to develop teacher education in Finland, several research projects have been launched.*

*The aim of this research was to find out preschool and primary school teachers' perceptions to what extent and what kind of generic skills their teacher's pedagogical studies had supported most. The data used in this study was collected electronically by E-lomake that was distributed through different social media channels. The received answers of induction phase teachers (n = 23) were analyzed both qualitatively and quantitatively. To gain a better insight, two of the respondents were also interviewed and the answers analysed qualitatively.*

*The results revealed that in general the respondents found that the attained generic skills helped them to cope with working life. Communication in a foreign language, acting in a multicultural environment, digital and communicative skills, and coping with stress were mentioned as not relevant or needing more attention.*

**Keywords:** *generic skills, Finnish teacher education, induction phase, teacher's pedagogical studies*

## Introduction

The fast development of globalization process and technological advancement have caused worldwide increased human activity by the rapid flow of information. This, in turn, has brought about major social, political and cultural changes. Global economic changes have caused shifts in economic strategies which influence the demands of the job market in general and the adequate education furthered by the state in particular (Green, Lingard, Mundy, & Verger, 2016; Juergensmeyer & Anheier, 2012; Tikly, 2001).

The meaning and practice of work are also changing, the boundaries between mental and manual work are fading away and becoming challenging, preparation

processes and training for work are undergoing changes. The acquisition of knowledge and skills are essential for increasing opportunities to find employment and sustainable maintenances, personal empowerment and socio-economic development in knowledge economies. This means that young people as well as adults need to adapt to the demands of today's societies, possessing a combination of knowledge, practical and social skills, positive attitudes, the ability to adapt to rapidly changing work environments. This in turn, demands re-examining essential topics connected with educational institutions, learning processes, necessary competencies and skills needed to train for any occupation (Rizvi & Lingard, 2010; Maclean & Wilson, 2009).

Higher education institutions have been criticized for not meeting the needs of labour market, their too theoretical teaching and their lack of innovative initiative in considering the real world situation. Key policy documents have been released by the Organisation for Economic Co-operation and Development (OECD) and the World Bank calling for remodelling of education in a rapidly changing economy and offering different visions for educational reforms (Farrell & Fenwick, 2007).

Thus, to prepare the future generations for these changes - to face competition, stressful daily life, limited resources and other challenges, also university education needs adjustments and transformations as research results show gaps between the developed skills and competences, and the proficiencies needed in working life (Andrews & Higson, 2008; Teichler, 2007; Tuononen, Parpala, & Lindblom-Ylänne, 2019).

### **Theoretical background**

Teaching and teacher profession are always changing and transforming. According to Männikkö and Husu (2019) teachers' interactive decision-making processes are complex. From the first moment of their work life teachers have to find solutions to different kind of educational problems. This is sometimes challenging especially in their induction phase, meaning the beginning of their work career. In real educational situations, teachers usually do not have the time to distance themselves and they have no time reflect analytically upon the variable demands of various educational situations. That is why the pedagogical studies, generic skills studies and later the further educational studies as well as peer mentoring activity are important for supporting teachers in their life-long learning process. In Finland all professional teachers study 60 cp teacher's pedagogical studies. During these studies also the generic skills of teacher's profession are in focus. University students are expected to develop not only pedagogical content knowledge, but also diverse academic competence and skills, such as analytical, communication, teamwork and problem-solving skills, enabling to succeed in

new situations, manage and adapt to changes (Van Dierendonck & Van der Gaast, 2013; Tait & Godfrey, 1999). These are often referred to as „generic skills“ - skills that are needed in every field of study and occupation. According to National Centre for Vocational Education Research (NCVER), generic skill is „a skill which is not specific to work in a particular occupation or industry, but is important for work, education and life generally, including communication skills, mathematical skills, organizational skills, computer literacy, interpersonal competence and analytical skills (NCVER, 2003).

Generic skills are also known by a number of terms like transferable skills, key skills, employability skills, core competences and generic competences as well as generic attributes, depending on the context and country, yet referring to the same kind of competences and skills (Suleman, 2018; Strijbos, Engels, & Struyven, 2015; Barrie, 2006; Lizzio, Wilson, & Simons, 2002; Havard, Hughes, & Clarke, 1998). In some countries they are specifically employment related, while in others greater emphasis has been placed on their social relevance. In this study, the term used is „generic skills“ in the meaning of all the abovementioned

Generic skills have also been included in national and international qualification frameworks such as the European Qualifications Framework (EQF, 2008), which enables a comparison of learners' knowledge, skills and competencies irrespective of where they gained their qualifications (European Qualifications Framework, 2008). Worldwide, numerous business leaders, politicians and educators have developed models and lists of twenty-first century skills that pupils and students need in their lives and work, both today and in the future (e.g. ACT21S 2012; Fadel, Bialik, & Trilling 2015; Gordon et al., 2009; P21).

Gordon et al. (2009) identify eight key competences, initially the framework for lifelong learning - communication in the mother tongue, communication in foreign languages, mathematical competence, basic competence in science and technology, communication digital competence, learning to learn, social and civic competences, a sense of initiative, entrepreneurship, and cultural awareness and expression-, which are being underpinned by transversal competences such as critical thinking, creativity, initiative, problem solving, risk assessment, decision taking and the constructive management of feelings.

As a result of the Bologna Process the educational systems in all European countries are in the constant process of reforming and developing. In order to connect the rich diversities and develop discussions in the realm of higher education about the comparability of curricula (in terms of structures, programmes and actual teaching), a process called „Tuning educational structures in Europe“ started in 2000 (González & Wagenaar, 2003). First, it was planned as a project to carry out the ideas of Bologna process and at a later stage the Lisbon

Strategy in the sector of higher education. Yet, it developed into a cycle of programmes and researches (TUNING 2009; Fallows & Steven, 2000). According to this source, generic skills and competencies are differentiated and categorised as following:

*Table 1 Categorisation of generic skills and competencies (González & Wagenaar, 2003)*

<b>Instrumental competences</b>	<i>cognitive abilities, methodological abilities, technological abilities, linguistic abilities: capacity for analyses and synthesis, capacity for organisation and planning, basic general knowledge, grounding in basic knowledge of the profession, oral and written communication in your native language, knowledge of a second language, elementary computing skills, information management skills - ability to retrieve and analyse information from different sources, problem solving, decision-making.</i>
<b>Interpersonal competences</b>	<i>individual abilities like social skills (social interaction and cooperation): critical and self-critical abilities, teamwork, interpersonal skills, ability to work in an interdisciplinary team, ability to communicate with experts in other fields, appreciation of diversity and multiculturalism, ability to work in an international context, ethical commitment.</i>
<b>Systemic competences</b>	<i>abilities and skills concerning whole systems (combination of understanding, sensibility and knowledge; prior acquisition of instrumental and interpersonal competencies required): capacity for applying knowledge in practice, research skills, capacity to learn, capacity to adapt to new situations, capacity for generating new ideas (creativity), leadership, understanding of cultures and customs of other countries, ability to work autonomously, project design and management, initiative and entrepreneur spirit, concern for quality, will to succeed.</i>

The topic has been of considerable interest in the context of university education in various countries and from different perspectives (Chan & Fong, 2018; Murdock-Eaton & Whittle, 2012; Keneley & Jackling, 2011; Badcock et al., 2010; Ballantine & McCourt Larres, 2007; Crebert, Bates, Bell, Patrick, & Gragnolini, 2004; Hager, Holland, & Beckett, 2002).

Fallows and Stevens underline the aspect that higher education should equip students not only with academic knowledge but also with general skills needed for „a transfer from the world of education into the world of working life“ (Fallows & Stevens, 2000, 8).

In Finland the topic of generic skills at university level has been researched in numerous studies lately (Koskinen, 2016; Koivunen, 2016; Tynjälä, Virtanen, Klemola, Kostainen, & Rasku-Puttonen, 2016). Pahkala (2015) reports on significant problems written communication skills among first year class teacher students. According to Ryky (2018) most of the examined generalist students from Helsinki University, missed competences especially related to communication and interaction. They also reported that challenges in working life

were mostly related to these skills. Kauppila (2019) emphasizes the importance of both, formal and informal learning environments in the learning of generic skills. Learning of specific generic skills is essential during university studies, even though it is not always easy to recognize learning them.

Tuononen (2019) explored university graduates' employability and transition to working life (University of Helsinki). The study demonstrated that the ability of graduates to recognise the various academic competences, including generic skills that they developed at university and deep-level learning and effort management in studying are important factors with respect to success in working life (Tuononen, 2019).

Virtanen and Tynjälä (2019) argue that „although generic skills have received widespread attention from both policymakers and educationalists, little is known regarding how students acquire these skills, or how they should best be taught. For example, in the university setting, generic skills have been taught as separate courses (e.g. courses on speech communication, scientific writing, or presentation skills), or have been integrated within subjects (e.g. an information retrieval course as a part of a research seminar)“ (Virtanen & Tynjälä, 2019, 881). They examined what kind of pedagogical practices were behind the learning of particular eight generic skills (resourcefulness, innovativeness, and creativity; ability to operate in new situations; critical thinking skills; problem-solving skills, decision-making skills; ability to solve occupational problems; continuing learning skills; self-assessment skills) in their study. The results indicated that the learning of such skills did not depend on any single method of teaching or particular pedagogical practice. Rather, learning generic skills demanded the use of various teaching methods and different pedagogical practices, especially combining traditional forms of studying (reading, lecturing, working alone) with methods that encourage students to actively process study contents, connect theory with practice, and collaborate with others (Virtanen & Tynjälä, 2019).

Recently, Tuononen et al. (2019) conducted a research at nine universities in Finland asking university graduates' (n = 911) opinion about the development of generic skills during university studies and how these were related to skills needed in working life. The results revealed that all generic skills were scored more important at work than during the studies developed at university. The biggest differences were reported in organising skills and collaboration skills revealing the need of development of those skills during studies.

## **Methodology**

This research is part of a 2-year project Ope osaa [Teacher can]during 2018 – 2019, which aim was to develop the future learning skills and the

competence base of teachers during their pedagogical studies in the Master's program at the Faculty of Education, University of Helsinki.

The project was carried out done in collaboration with the Faculty of Education, subject faculties, training and field schools and other universities (Aalto University and University of the Arts). The aim of the project was to develop well-functioning cooperation models of pedagogical studies for teachers. The materials and outcomes of the project are shared on Ope osaa-website and are accessible by any interested parties and/or universities. Lately there has been much interest in how university level studies develop students' generic skills and to what extent university education meets the requirements of working life.

The purpose of the qualitative research was to explore and examine how recent graduates of the faculty of educational studies from University of Helsinki reflect upon teachers pedagogical knowledge, especially the generic skills acquired during their studies. They were asked to give feedback about their studies, especially considering the development of generic skills at the university and how these skills related to their real working life expectations and needs.

In the present study (see Figure 1), in order to find out preschool and primary school teachers' perceptions of generic skills and real working life needs, content analysis (Cohen, Manion, & Morrison, 2011) was carried out in few phases. For data collection, questionnaires and interviews are often used together (Harris & Brown, 2010) – qualitative interviews usually enable to penetrate more deeply into the research themes, while questionnaires provide a wider survey (Kendall, 2008).



*Figure 1 Research design and data*

Data were collected by conducting a questionnaire using the E-lomake web-based environment (the first phase of the study). The request to participate in the research was sent via 3 different social media channels (FB groups of pre-school teachers, class teachers, kindergarten teachers) and existing E-mail addresses (N = 13). The questionnaire consisted of closed and open-ended questions (the questionnaire can be reached from: <https://elomake.helsinki.fi/lomakkeet/100433/lomake.html>). The closed questions included 18 different generic skills: information and communication technologies (ICT) skills, communicative skills, self-initiative and self-directing, problem-solving skills teamwork skills, the ability to learn and absorb new things, critical thinking skills, negotiation skills,

design and organizational skills, ability to communicate in a foreign language, collaborative teaching skills creativity, ability to communicate in the mother tongue, pedagogical leadership skills, teaching and training skills, acting in multicultural environment, performing skills, resistance to stress. The respondents had to choose their answer on the 5-point Likert scale. The open-ended questions added some gave the opportunity for the respondents to comment and add some more information about and concerning the generic skills.

Answers were received from 23 university graduates and were analysed both, qualitatively (content analysis) and quantitatively (descriptive statistics).

In order to expand the already collected data, the second phase of the study, 2 interviews were carried out with respondents (R1; R2) who gave their consent. The topics of the semi-structured interviews were derived from the questionnaire. The interview lasted about 45 minutes and were recorded. The data was transcribed and analysed qualitatively by using the content analysis and interpreted by the same categories as in the questionnaire.

Based on the theoretical material, the research instrument for analysing the data was created (table 2). Accordingly, the results are structured basing on those three categories: systemic skills, interpersonal skills and instrumental skills.

*Table 2 Research instrument for analysing the generic skills*

<b>Instrumental skills</b>	<b>Interpersonal skills</b>	<b>Systemic skills</b>
information and communication technologies (ICT) skills	communicative skills	self-initiative and self-directing
problem-solving skills	teamwork skills	the ability to learn and absorb new information
critical thinking skills	negotiation skills	planning and organizational skills
ability to communicate in a foreign language	collaborative teaching skills	creativity
ability to communicate in the mother tongue		pedagogical leadership skills
teaching and training skills		acting in multicultural environment
performing skills		resistance to stress

## **Findings**

The respondents age structure was the following:  
 under age 25 = 2 respondents; between age 25 – 35 = 16 respondents; over age 35 = 5 respondents.

Out of all the respondents 19 were working as early childhood educators and 4 as class teachers.

Only 9 respondents had previous working experience before their studies in the university and 14 reported to have no working experience in the field.

### ***I - the results of the questionnaire***

The respondents pointed out that the most developed generic skills during their studies had been:

*self-initiative and self-directing (N = 22), the ability to learn and absorb new information (N = 21) and critical thinking skills (N = 16).*

At the same time the less developed generic skills during their studies appeared to be:

*ability to communicate in a foreign language (N = 15), ICT skills (N = 13), acting in multicultural environment (N = 11), problem-solving skills (N = 10) and resistance to stress (N = 10).*

Some of the respondents added free comments to these answers:

*From the standpoint of early childhood educator, there should have been more training in how to survive in the field (Q 9).*

*Already during the studies there should have been more practice in writing study plans and all the different „papers“ (Q 15).*

*More time should have been spent on dealing with different documents, writing development plans and also concerning pedagogical leadership (Q 20).*

The same list of generic skills was rated for the most needed generic skills concerning their work and all the respondents (all N = 23) pointed out the following skills:

*self-initiative and self-directing, negotiation skills, ability to communicate in the mother tongue and teamwork skills.*

Also:

*the problem-solving skills, planning and organizational skills and self-initiative and self-directing skills*

were rated quite highly (all N = 22).

The respondents evaluated as the less needed generic skills in their work:

*ability to communicate in the mother tongue (N = 13), collaborative teaching skills (N = 7) and acting in multicultural environment (N = 7).*

There were some interesting comments on the generic skills needed in working life:

*Working in a kindergarten is really very stressful. One has to be very creative and possess good problem solving skills in a somewhat chaotic reality. Very many are leaving the field and feel really burnout. The university is not to blame, but the endless cuttings, changes and.... are the real cause (Q 3).*

*There is not even 1 minute for yourself to take a breath. There's not enough time – this is the reason why so many are giving up the job (Q 4).*

*The workload is enormous ....more time and more „tools“ for pedagogical leadership would be needed (Q 7).*

*Concerning my work, there should be more contact lessons and practise in arts and craft subjects (Q 22).*

## **II – results of the interviews**

The first interviewee (R1) holds a Master's degree in education but is also a qualified early childhood education teacher. She works as a teacher in a kindergarten. She has been in the field for almost 20 years. She also had earlier working experiences in arts design.

The second interviewee (R2) holds a Bachelor's degree in education. During the interview she didn't attend lectures any more, but was writing her Master's thesis to graduate in educational sciences. She also had a vocational training as a nurse.

One of the major topics of concern was writing and compiling different documents.

*Lately there have been so many changes concerning early childhood education. And the working load of writing and planning different documents has increased enormously. Teachers definitely need more support like mentoring or in-service courses in compiling and fulfilling all those papers (R1).*

*I think that the written documents and especially assessment of the child's development needs more clarification, supporting and time. All the endless changes are happening There are so many other things to do..... not enough time left for children (R2).*

The first interviewee also pointed out that although early childhood teachers have the pedagogical knowledge, they need more skills how to use it and put it into action.

*We should discuss and think more about how teachers can help and support children in their development and growth..... I think that the question about the real role of the teacher and their tasks need more clarifications..... and what duty every member of the staff has in the kindergarten. The teachers are overloaded with work (R1).*

Teachers also pointed to the connection between burnout and teamwork skills.

*The working load is really heavy. But it also depends greatly on the team you are working with. ... sometimes, when the colleague is constantly away for some reason and there is no replacement available, all the work is on on your shoulders... it is really exhausting and stressful (R2).*

*The tasks should be better .... more exactly distributed between the staff: what are the tasks of the teacher, what are the tasks of the nanny. . I suggest that the whole concept of kindergarten structure needs change..... and different teams within one institution should cooperate more (R1).*

Definitely one of the important skills that came up in different contexts were communicative skills.

*I remember that during my studies we discussed a lot in groups and during lectures. I find it very important and that's why there should not be any cutting in this. .... During my first years at work I remember that it was sometimes difficult to communicate with some parents – how to discuss on some difficult issues or deal with emotions (R1).*

*As a teacher you need to communicate with different people on different levels like parents, social workers, schools, health services, cultural institutions etc .... also in multicultural surroundings. I find the last could need some more .... skills, knowledge... (R2).*

In addition, the interviewees mentioned some really meaningful topics needing mentoring or in-service training like more skills and knowledge concerning first aid (R2), more cooperation regarding arts subjects (R1; R2), multicultural issues (R1, R2), coping with stress (R1), children welfare (R2).

### Conclusions and discussion

The results of this study reveal some interesting information concerning Finnish primary and pre-school teachers' perception about generic skills.

The research revealed that the most developed generic skills concerning the respondents' academic studies - *self-initiative and self-directing, and the ability to learn and absorb new information* - belong to the category of systemic skills (with the exception to *critical thinking skills* which is part of instrumental skills). While the generic skills that were pointed out as supporting their working life most - *self-initiative and self-directing, negotiation skills and teamwork skills* (with the exception to the *ability to communicate in the mother tongue* which is part of instrumental skills)– belong to the category of interpersonal skills.

Comparing the generic skills acquired during academic studies and supporting their working life, there is one skill in common and this is *self-initiative and self-directing* (category of systematic skills).

While the overlapping in the less needed skills in academic studies and working life turned out to be the *ability to communicate in a foreign language* (category of instrumental skills).

Thus, *the problem-solving skill* (category of problem solving skills), that was mentioned as one of the most needed in working life, turned out to be less supported during the academic studies.

As the data represents only a limited sample of Finnish primary and pre-school teachers, the results cannot be generalized. However, some tendencies concerning generic skills can be observed.

It can be said on the basis of the analyses that generic skills concerning academic studies and working life have some similarities but this topic needs to be further researched.

Half of the countries in Europe do not provide any support or promotion to the teaching profession during their first years of teaching. Teachers' profession is emphasized as a lifelong learning developmental process (Fransson & Gustafsson, 2008, 7; Kemmis etc., 2014) - it should be seen as a long-term learning process including the university study phase, the transition to work, mentoring and support during the induction phase, and possibilities for professional development and further education during the career. Generic skills are important future learning skills but also they need to be updated as society changes.

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# TRAINING FOR THE INNOVATIVE TEACHING AS A DETERMINANT OF THE PROFESSIONAL MOBILITY OF THE FUTURE TECHNOLOGY TEACHERS

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**Abstract.** *The article deals with the professional mobility and readiness for the innovative teaching of future technology teachers as interdependent components. The purpose of the article is to study the organizational and methodological aspects of forming the professional mobility of future technology teachers in the context of preparation for innovation activities at Ukrainian Teacher Training Universities. Using the complex of theoretical and empirical research methods, the main organizational and methodical aspects of training were determined: the construction of the individual trajectory of study based on selected disciplines; the acquisition of new branches of activity; the forming of the complete conception of technological education and future innovative teaching; the introduction of innovative technologies (interactive discussions, motivational trainings, group forms of work, a problem-solving training, design and research activities, mixed learning, etc.); implementation of Information and communications technology (ICT), distance, Smart and hybrid education systems (e-learning resources, electronic educational and methodical complexes, Web services, individual and group projects based on Web quests and Blog quests); the monitoring of the readiness level for professional mobility; the strengthening of the consultative and coordinating function of teachers. The implementation of certain aspects expands the possibilities of optimizing the educational process not only at the level of formation of the readiness for professional mobility, but also at the level of the entire system of training future technology teachers to innovative teaching. It requires: creating conditions for continuous learning; the orientation of the final stages of pedagogical education to the formation of students' academic mobility; the rapid expansion of vertical and horizontal professional mobility ranges; the forming of future technology teachers' readiness and the ability to change the specialization, the place of work and even the profession, if necessary, or to master several specialties or training profiles at the same time.*

**Keywords:** *innovative teaching, mobility, professional mobility, technology teacher.*

## Introduction

The integration of Ukraine into the European and world community, the current level of the development of the society, the processes of modernization of the industrial, socio-economic and educational fields, the accelerated

introduction of new technologies cause the emergence of a dynamic labor market, which creates not only certain requirements for specialists, but also initiates the emergence of new areas of professional activities.

In the context of the study of the formation of the professional mobility of future technology teachers, Ewald F. Zeer (2014) is relevant, who notes that the mobility is considered in vocational education in the following dimensions: “social and economic – as readiness and ability to adapt to rapidly changing labor market conditions; professional – as readiness and ability to rapidly and successfully master new machinery and technologies within the same profession, if necessary, to master the adjacent and new professions, as well as to carry out status moves in the space of the professional hierarchy; pedagogical innovations – as an activity in the creation, acquisition and use of innovations in the field of education” (Zeer, 2014, p. 35).

The fundamental works on developing the theme of social movements belong to the American authors (Blau & Duncan, 1967; Lipset & Bendix, 1954; Lipset & Smelser, 1966), who cover issues related to the research, the use of terminology, the involvement of statistics to the processing of empirical information. Currently, the mobility is widely considered by researchers, particularly as: the process of the professional training and self-realization; the quality of personality; the readiness for the manifestation of any kind of mobility (social, professional, personal, psychological, etc.); the integrative ability, which provides the readiness to change professional status, career growth, etc.

We share the opinion of Blau & Duncan (1967) who state that empirical research on mobility should be focused on analyzing the conditions that influence professional achievement and mobility within a particular society. The purpose of the article is to study the organizational and methodological aspects of forming the professional mobility of future technology teachers in the context of preparation for innovation activities at Ukrainian Teacher Training Universities.

The objectives of the research is to: 1) investigate the interconnections of preparation for the innovative teaching and professional mobility of future technology teachers; 2) analyze the results of the 4th year student survey after passing technological and preservice teaching practice; 3) identify and substantiate the organizational and methodical aspects of forming the professional mobility of future technology teachers in the context of preparation for innovative teaching.

## **Methods**

To meet the objectives of the research, a theoretical complex was used (the analysis of pedagogical, scientific and methodological literature for comparison,

the comparison of different views on the problem under study, the curricula and programmes with the aim of studying the peculiarities of the organization of the training of future technology teachers at Ukrainian Teacher Training Universities) and empirical (conversations, the 4th year student survey after passing technological and preservice teaching practice) research methods.

## **Results and Discussion**

It has been determined (Shevchenko, 2013, p. 498) that innovative teaching is a complex formation, a set of various kinds of work with different goals and nature. The works correspond to the main stages of the development of innovative processes and aimed at creating and amending to the teacher's own work ethics. It involves developing, disseminating or using of educational innovations; has a complex, multi-faceted nature; combines scientific, technological and organizational measures. Innovating is a systemic activity aimed at implementing innovations based on the analysis, use and introduction of new scientific knowledge, ideas and approaches.

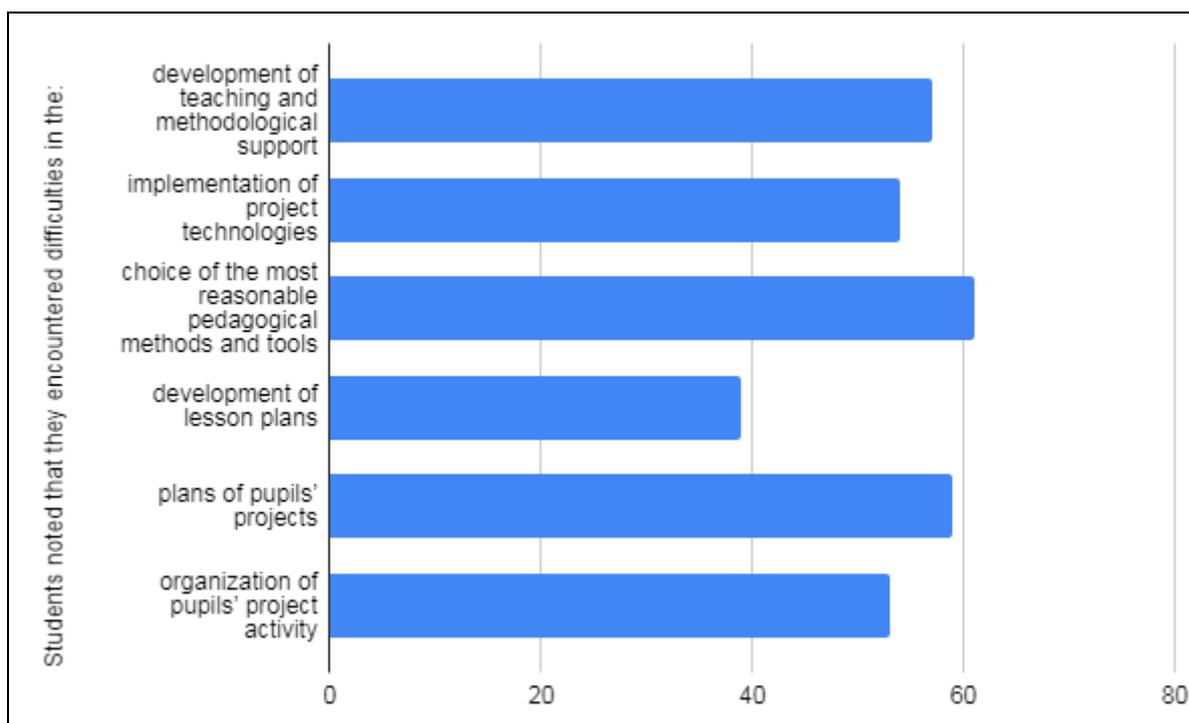
The article considers the innovative teaching of future technology teachers in two aspects: 1) improvement and development of the educational process through the development and implementation of new educational programmes, the allocation and development of new areas of activity and ideas, the creation and implementation of innovative projects, planning and implementation of pedagogical innovations to ensure improving the quality of education (ie, aimed at the result); 2) as a means of developing the abilities of future teachers by obtaining new competencies, expanding the horizons, changing the motivation both for innovative teaching and for teaching in general (ie, aimed at a person).

The relevance of the study of the formation of the professional mobility of future technology teachers in connection with the preparation for innovative teaching is conditioned by the need for preparation for work in various educational institutions (schools, colleges, vocational and non-technical educational institutions); conducting various types of training sessions (lessons, circles, studios, master classes, etc.); work with students of different age and social groups; solution of non-standard professional and technological tasks; interdisciplinary interaction and a combination of several specializations of technological education simultaneously; a quick reorientation to teaching new profiles and technology education specializations.

The survey of the 4th year 87 students (of the specialty 014 Secondary education, subject specialization 014.10) Labor studies and Technology after passing technological and preservice teaching practice has shown a number of problems, in particular, future technology teachers needed a considerable amount of time in order to adapt to educational activity during the practice

(65%), to work in a new team (67%). Only 48% were satisfied with the chosen specialization; 38% were able to work in the related specialization of technological education; 72% were interested in obtaining additional specialization; 74% were ready to use ICT; 68% - for self-development of new knowledge; 55% – for self-fulfillment of technical and technological tasks; 42% – to perform applied tasks in related specialization; 58% of respondents prepared an interdisciplinary project, Web or Blog Quest. Students noted that they encountered difficulties in the development of teaching and methodological support, the implementation of project technologies, the choice of the most reasonable pedagogical methods and tools, the development of lesson plans, the plans of pupils' projects, the organization of pupils' project activity (see fig. 1).

64% of students indicated that they planned to work at educational institutions after studying and mentioned the possibility of career growth (61%), higher social status (66%), and well-being (58%) as the reasons for their choices.



*Figure 1 Diagnosis of difficulties experienced by students after completing the practice*

The analysis of the results of the survey allowed us to conclude that the preparation of students for innovative teaching as a determinant of professional mobility should be considered as the readiness and ability of future technology teachers to work in conditions of rapid dynamic (horizontal and vertical)

changes of professional functions within one professional activity and mastering of new specialties (specializations or profiles) in the context of the variability of the content of technological education. It is also important to analyze the readiness of future technology teachers for the innovative teaching on the basis of subject activity, value orientations, value self-determination, self-realization, self-improvement and subjective experience.

In general, the professional mobility of future technology teachers simultaneously characterizes: personality qualities (openness to the world, trusting people and trusting oneself, flexibility, efficiency, self-control, tolerance); personal potential, ability to apply the acquired knowledge, abilities and skills in different kinds of activities; abilities (reflection, self-regulation, self-determination, goal-setting, designing and management); capability (seeing and understanding the essence of changes, the variability of development, thinking constructively and productively, designing the necessary changes in the micro-society, group, solving problems, adapting to changes); readiness to move (expand, deepen) from one type and / or level of innovative teaching to another, whose result is the self-realization in life and profession, mastering of new competences; the process of a specialist's self-improvement as well as his/her both professional and living environment.

Analysis of the research on the problems of the formation of future teachers' professional mobility (Kadakin & Zeynalov, 2016; Semenog, 2017; Syicheva, 2017; Villegas-Reimers, 2013), the peculiarities of its formation in the conditions of innovative education (Falyakhov & Shatunova, 2015; Schwille, Dembele & Schubert, 2007; Shelekhova, Blyagoz, Nagoev, & Teshev, 2015), the generalization of one's own pedagogical experience. As well as the analysis of the curricula for the training of future technology teachers at Vinnytsia State Mykhailo Kotsiubynskyi Pedagogical University, National Drahomanov Pedagogical University, Ternopil National Volodymyr Hnatiuk Pedagogical University, Uman State Pavlo Tychyna Pedagogical University allowed us to identify the main organizational and methodological aspects of forming the professional mobility of future technology teachers:

- creating of conditions for maximum realization of potential opportunities of each student, which is achieved due to the nonlinearity and variability of curricula and programmes, and provides the possibility of constructing an individual trajectory of training based on our own choice of one or another selective discipline (analysis of curricula for preparing bachelors in the field of knowledge 01 Education, specialty 014 Secondary education, subject specialization 014.10 Labor studies and technology showed that each cycle of disciplines contains from 2 to 8 selective disciplines, each including up to 6 disciplines to choose from (for example, "Fibrous Fine Processing Practice" or "Practice on Technical Modeling and Design"; "Methodology of Profile

Technology Training” (by specialization) or “Creative technologies of teaching”), or the disciplines of in-depth study of a certain specialization (for example, in-depth study of the discipline “Fundamentals of design”: “Drawing and painting”, “Ethnological sculpture”, “Composition basics, history and arts”, “Ethnological artistic Workshop”; “Informatics”: “Special Informatics”, “Algorithmic Programming Languages”, “System Software”, “Computer Design”, “Methodology of Computer Science Training”);

- focusing on the formation of fundamental knowledge and components of readiness for the innovative teaching (motivational, cognitive, activity-technological and creative-reflexive) and their integration through interdisciplinary connections as the basis for the acquisition of new fields of activity (in the curricula of bachelor's training it is provided by the possibility of choosing a group of disciplines in-depth study of the Basics of Design, Informatics, Basics of Entrepreneurship, Basics of Automobile Transport, etc., future technology teachers join master courses by already selected one or 2-3 additional specializations (for example: “Fundamentals of Entrepreneurship”, “Informatics”, “Fundamentals of Design, Drawing”, “Manager in Road Transport”, “Head of a Circle of Out-of-School Educational Institutions” etc.);

- forming a holistic conception of technological education and future innovative teaching that will prepare students for overcoming the psychological barriers that may arise while teaching new specializations or profiles of the educational branch of “Technology” or career growth (simultaneous study of disciplines “Pedagogy”, “Psychology”, “Theory and Technique of Technological Education” and professionally oriented disciplines (“Machine Science”, “Technological Practicum”, “Materials Science and Technologies for the Production of Structural materials” and others.);

- developing synergistic perception of the world, activation of conscious self-regulation of arbitrary activity of students through stimulation of their return to reflexive position, which will promote the development of decision-making skills and act in situations of uncertainty and unpredictability (through active involvement of students in interactive discussions, motivational trainings, group forms of work (for example: role and business games, “Debate”, “Metaplan”, “Industrial Failure”, “Workshop of the Future”, “Joint Project”, “Information Search”, “Carousel”, “Teachback”, “Synectic brainstorming”), problem learning, project activity, research activities, work on mixed learning technologies, etc.);

- implementing of ICT, including distance, Smart and hybrid education systems (development, filling and use of e-learning resources, electronic educational and methodical complexes (for example: “Theory and methodology of labor and vocational training”, URL: <http://ito.vspu.net/ENK/2011->

2012/TIMTPN/index.htm; “Introduction to the specialty”, URL: [http://ito.vspu.net/ENK/2015-2016/vstup\\_pub/index.html](http://ito.vspu.net/ENK/2015-2016/vstup_pub/index.html); “Method of teaching Fundamentals of Information Technology”, URL: <http://ito.vspu.net/ENK/MVOIT/index.html>; “Electronic Document Workflow”, URL: [http://ito.vspu.net/ENK/2015-2016/komp\\_doc/index.htm](http://ito.vspu.net/ENK/2015-2016/komp_doc/index.htm); the involving students in independent educational activities by means of Web services (for example: “Innovation in education and science: main trends and perspectives” blog, URL: <http://iito123.blogspot.com/>); implementation of individual and group projects based on Web quests and Blog quests (for example: Web-quests “Turning Wood Technology”, URL: [http://ito.vspu.net/ENK/2011-2012/TIMTPN/rob\\_stud\\_2012/StratiyGarmazyGrutsak/golovna.html](http://ito.vspu.net/ENK/2011-2012/TIMTPN/rob_stud_2012/StratiyGarmazyGrutsak/golovna.html) “Technology of making soft toys”, URL: [http://ito.vspu.net/ENK/2011-2012/TIMTPN/rob\\_stud\\_2012/2013/B/Braslsvez/index.html](http://ito.vspu.net/ENK/2011-2012/TIMTPN/rob_stud_2012/2013/B/Braslsvez/index.html); “Technology of Handwriting of the Fabric”, URL: [http://ito.vspu.net/ENK/2011-2012/TIMTPN/rob\\_stud\\_2012/Rud/index.html](http://ito.vspu.net/ENK/2011-2012/TIMTPN/rob_stud_2012/Rud/index.html); Blogs “Technology of Baking and Confectionery Production”, URL: [http://ito.vspu.net/ENK/2011-2012/TIMTPN/rob\\_stud\\_2012/2013/Punko/index.html](http://ito.vspu.net/ENK/2011-2012/TIMTPN/rob_stud_2012/2013/Punko/index.html), etc.)

- monitoring individual characteristics of the level of readiness for the professional mobility (the use of diagnostic techniques adapted for future technology teachers: How do you feel about your profession (Vershlovskiy & Matyushkina, 2005, 80-82); Motivation of professional activity (Zamfir, modification of Rean, 2006); Questionnaire for the study of the development of cognitive and professional motives (Bakshaeva & Verbitsky, 2019, 137-140); The level of self-actualization of personality. (CAT test, SAMOAL Questionnaire).

- strengthening the consultative-coordinating function of teachers.

Successful implementation of certain organizational and methodical aspects is possible only due to the functional unity of all elements of the pedagogical system, such as the organization of various types of practices, research work of students, coursework and diploma design, educational work, etc. The main load in this process falls on the system of normative and selective disciplines. Within the framework of normative disciplines the purposeful work on the formation and development of students’ readiness for the professional mobility is being carried out, and as to the selective disciplines an individual trajectory of the preparation for the future innovative teaching and the formation of the professional mobility is being developed. One can take into account the subject experience, interests, inclinations, students’ motives of students, and, thereby, increase motivation to professional self-realization exactly during studying selective disciplines rather than studying normative ones.

Implementation of certain aspects expands the possibilities of optimizing the educational process not only at the level of formation of readiness for the

professional mobility, but also at the level of the entire system of training future technology teachers to innovative teaching. It requires: creation of flexible working plans, training and work programmes; the introduction of variational training modules, taking into account the specialization and modernization of education and technologies (for example, in the course “Theory and methodology of labor and vocational training”, the study of variation modules ‘The methodology for studying labor education (computer technologies) in 10-11 grades”, “Methodology study of labor studies (design basics) in grades 10-11”, etc.; increasing the degree of student participation in planning their own trajectory of education; introduction of innovative pedagogical technologies and teaching tools.

The implementation of these provisions allows (especially for undergraduate and postgraduate students) to study not only the main educational programme, but also to get acquainted (and further study through cross-entry or second higher education) with educational programmes in related specialties or completely new ones, which is an essential prerequisite of academic mobility and successful preparation for the professional mobility.

### **Conclusions**

Considering the above stated the professional mobility and readiness for the innovative teaching of future technology teachers is viewed as interdependent components: the innovative teaching is a determinant of the formation of professional mobility, and the professional mobility contributes to formation of readiness for the innovative teaching.

The analysis of the results of the 4th year students survey after technological and preservice teaching practice showed that preparation for the innovative teaching as a determinant of the professional mobility should be considered as the readiness and ability of future technology teachers to respond flexibly to ever-changing external (due to changes in the system of general secondary and vocational education, the educational field “Technologies”) and internal (due to training or work in an innovative educational environment of the specific educational establishment) conditions.

Based on the analysis of the research into the problems of innovative education as a factor for the formation of the professional mobility of future teachers, the curricula for the training of future technology teachers in teacher training universities in Ukraine the following organizational and methodical aspects were defined: the construction of an individual trajectory of studying based on the independent students’ choice of selected disciplines; the acquisition of new branches of activity; the formation of a holistic image of technological education and future innovative teaching; the application of innovative

technologies; the introduction of ICT, distance, Smart and hybrid education systems; the monitoring of readiness for the professional mobility; the strengthening of the consultative-coordinating function of teachers.

Further definition and scientific substantiation require the development and implementation of variable and interdisciplinary programmes from various profiles and specializations of the educational field “Technologies”, testing and experimental verification of certain aspects of the formation of the professional mobility, the development of a system for monitoring the readiness level for the professional mobility.

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## ФОРМИРОВАНИЕ ИССЛЕДОВАТЕЛЬСКИХ КОМПЕТЕНЦИЙ В ПРОЦЕССЕ ПОДГОТОВКИ ПЕНИТЕНЦИАРНЫХ ПСИХОЛОГОВ

### *Formation of Research Competencies in the Process of Training Penitentiary Psychologists*

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**Abstract.** *Training of penitentiary psychologists on the educational program «Psychology of official activity» is conducted in two universities of the Federal penitentiary service (FSIN of Russia). An important component of the practical and scientific activities of the penitentiary psychologist is the development, conduct and analysis of various psychological studies that require a high level of development of the necessary competencies. This article discusses the author's methodology IVDRC (Individual vector of development of research competencies), used in the training of penitentiary psychologists in the study of mathematical methods in psychology. The methodology is based on the continuity and professional orientation of training courses, individual approach, support and control of the stages of study of disciplines, the use of information technologies, own methodological materials and manuals. The developed technique is a generalization of long-term experience of teaching mathematical disciplines in departmental higher education institution. The technique of IVDRC has been successfully used for several years at the psychological faculty of the Vologda Institute of Law and Economics of the Federal Penal Service of Russia. To date, more than 150 cadets have been trained using the technology of IVDRC. The article analyzes some results and efficiency of its application using statistical methods.*

**Keywords:** *departmental high school, mathematical methods in psychology, methods training of penitentiary psychologists, research competence.*

## **Введение** *Introduction*

В последние десятилетия в оценке уровня профессиональной подготовки специалистов в различных сферах деятельности приоритетным является компетентностный подход. Под компетенцией понимается сочетание практических, теоретических знаний, познавательных умений, способности успешно выполнять профессиональные задачи. Определение набора компетенций, которые служат основой деятельности практикующего психолога, является предметом обсуждения специалистами в научной литературе (Fouad et al., 2009; Hatcher et al., 2013; Kvasova & Savina, 2017). Качество подготовки будущих пенитенциарных психологов в России, согласно Федеральному государственному образовательному стандарту высшего образования, оценивается уровнем сформированности комплекса общекультурных, общепрофессиональных, профессиональных и профессионально-специализированных компетенций.

Успешная практическая и научно-исследовательская деятельность психолога, его профессиональный рост и развитие, коррелируют с уровнем сформированности исследовательских умений, поскольку специалист-психолог постоянно сталкивается с необходимостью планирования, организации, проведения, обработки, анализа и интерпретации данных для решения прикладных задач. Важность формирования исследовательской компоненты компетенций отмечена в «Международной декларации об основных компетенциях в области профессиональной психологии», принятой на V Международном конгрессе по лицензированию, сертификации и аттестации в психологии (Стокгольм, июль 2013 г.). Поэтому формирование навыков исследовательской деятельности – важнейшая задача подготовки пенитенциарного психолога.

Особенности формирования и оценивания компетенций для разных направлений профессиональной деятельности в вузах России постоянно рассматриваются на страницах научных журналов (Vanykina & Sundukova, 2017; Medvedeva, Martynyuk, Pan'kova, & Solovyova, 2018; Ostapenko, 2011; Skorohodova, 2013; Slobodskaya & Filipova, 2019). Исследовательские компетенции базируются на знаниях и умениях, полученных в рамках довузовского образования, и развиваются в течение всего периода обучения в вузе. Исследовательские компетенции имеют сложную структуру и специфику для каждого вида профессиональной деятельности. Учеными разрабатываются различные подходы к структуре и содержанию исследовательских компетенций, например, О.В. Феединой предложена модель, включающая более тридцати умений и способностей, объединенных в семь блоков, и др. (Chernyshev & Irodova, 2015).

Целью данной статьи является описание и анализ эффективности применения методики «Индивидуальный вектор развития исследовательских компетенций» (ИВРИК) в подготовке пенитенциарных психологов в Вологодском институте права и экономики ФСИН России, реализуемой в процессе преподавания дисциплины «Математические методы в психологии».

В ходе исследования были использованы следующие методы: анализ научной литературы по проблеме исследования, методика ИВРИК, педагогический эксперимент, статистические методы обработки и анализа (группировка, описательные статистики, критерий Манна-Уитни).

### **Методология** *Methodology*

#### ***Подготовительный этап***

На этапе подготовки эксперимента:

- разработана методика ИВРИК и ее методическое сопровождение: практические расчетные работы, методические материалы для подготовки к выполнению практических работ и самостоятельной работы курсантов, индивидуальные задания для формирования исследовательских компетенций;
- выделены компоненты исследовательских компетенций, для каждой компоненты определены уровни ее сформированности и критерии оценивания, подготовлены индивидуальные бланки регистрации уровня сформированности компонент исследовательских компетенций;
- для проведения педагогического эксперимента выбраны две группы курсантов второго курса психологического факультета Вологодского института права и экономики ФСИН России, проведено сравнение их успеваемости по дисциплине «Математика», определены контрольная и экспериментальная группы.

Рассмотрим составляющие подготовительного этапа.

В течение нескольких лет обучение курсантов осуществлялось по авторской методике, модель которой представлена на рисунке 1.



*Рисунок 1. Модель методики ИВРИК*  
*Figure 1 Model methodology IVDRC*

В основе методики ИВРИК лежит компетентностный подход с акцентом на развитие исследовательских компонент. Приоритетными также являются профессиональная направленность, проявляющаяся в содержании дисциплины, и преимственность курса «Математические методы в психологии», который базируется на предмете «Математика» и является основой для изучения ряда дисциплин специализации. Освоение курсантами математических методов подкрепляется разработанными авторами методическими рекомендациями по изучению дисциплины, выполнению практических расчетных работ и самостоятельной подготовки, системой индивидуальных заданий для формирования исследовательских компетенций, авторскими учебными пособиями. Серия из девяти практических расчетных работ выполняется с помощью прикладных компьютерных программ.

В ходе исследования в процессе преподавания дисциплины «Математические методы в психологии» при выполнении практических расчетных работ измерялись, анализировались и развивались следующие компоненты исследовательских компетенций курсантов: А – способность формулировать цель исследования, В – умение выбирать методы и способы выполнения исследования или его этапов, С – практические умения по реализации цели исследования, D – способность корректно

интерпретировать полученные результаты, Е – способность понимать область применения математических методов в психологии.

В статье (Slobodskaya & Filipova, 2017) предложена методика оценивания уровней сформированности компонент исследовательских компетенций: каждая из пяти компонент оценивается экспертами по 10-ти балльной шкале, определяется уровень каждой из них: высокий, средний или низкий.

Форма индивидуального бланка регистрации уровней сформированности компонент исследовательских компетенций представлена в таблице 1.

*Таблица 1. Бланк регистрации уровней сформированности исследовательских компетенций*

*Table 1 Form for registration of the levels of formation research competencies*

КомпONENTА	Входной контроль $K_{i1}$	Промежуточный контроль			Итоговый контроль $K_{in}$
		$K_{i2}$	$K_{i3}$	...	
А					
⋮					
Е					
$ \overrightarrow{K_{in}K} $					
$\eta$					

На начальном этапе освоения дисциплины (в начале эксперимента) у каждого обучающегося измерены уровни сформированности указанных выше пяти компонент исследовательских компетенций. Совокупность этих оценок, с алгебраической точки зрения, можно интерпретировать как точку  $K_{i1}$  в 5-мерном пространстве (где  $i$  – номер курсанта), являющуюся началом индивидуального вектора развития исследовательских компетенций. Точка максимального развития всех компонент  $K$  – конец вектора. Заметим, что длина вектора  $\overrightarrow{K_{i1}K}$  является условной мерой «объема необходимой работы» преподавателя и курсанта для достижения конечного результата. Для оценки результативности этой работы может быть использована величина  $\eta$  – «эффективность индивидуального продвижения», рассчитываемая по формуле 1, предложенной авторами:

$$\eta = \left( 1 - \frac{|K_{in} K|}{|K_{il} K|} \right) \cdot 100\% , \quad (1)$$

где  $K_{in}$  – промежуточная или конечная точка (совокупность оценок на  $n$ -м ( $n = 1, \dots, 10$ ), промежуточном или конечном, этапе обучения).

Выполняемые курсантами в малых группах практические расчетные работы оформляются в виде письменного отчета и защищаются индивидуально в беседе с преподавателем. Таким образом, контроль формирования компонент исследовательских компетенций осуществляется многократно в течение всего времени обучения, что позволяет фиксировать промежуточные результаты и корректировать «индивидуальный вектор развития исследовательских компетенций». Коррекция продвижения каждого курсанта осуществляется с помощью индивидуальных консультаций и разработанной авторами системы индивидуальных заданий для формирования исследовательских компетенций.

Индивидуальные задания для формирования исследовательских компетенций представляют собой совокупность практикоориентированных задач, предлагаемых курсантам для освоения каждой темы, а также формирования и коррекции компонент исследовательских компетенций. База заданий по каждой теме включает до 15 задач. Например, если в ходе собеседования, консультации или защиты работы по теме «Дисперсионный анализ» преподаватель фиксирует у курсанта низкий или средний уровень сформированности компоненты «способность формулировать цель работы», то кроме выполнения основного задания курсанту предлагается дополнительно ряд задач, в которых необходимо выделить результативный признак, признак-фактор, уровни фактора, сформулировать цель.

Эксперимент был проведен в 2018–2019 учебном году. Основой для сравнения контрольной и экспериментальной групп перед началом эксперимента была выбрана успеваемость по дисциплине «Математика», которая является базовой для освоения математических методов в психологии.

Объемы выборочных совокупностей (контрольной и экспериментальной групп) составили соответственно  $n_K = 19$ ,  $n_Э = 20$ , средние арифметические значения успеваемости по математике –  $\bar{x}_K = 3,70$ ,  $\bar{x}_Э = 3,63$ . Наблюдаемое значение критерия Манна-Уитни  $U_{\text{набл.}} = 178$ . Для  $n_K = 19$  и  $n_Э = 20$ , а также уровней значимости  $\alpha = 0,05$  и  $\alpha = 0,01$

критические значения критерия равны  $U_{\text{крит.}} = 130$  и  $U_{\text{крит.}} = 107$  соответственно. Таким образом, средние арифметические значения в группах отличаются статистически незначимо, группы могут рассматриваться в качестве контрольной и экспериментальной при проведении исследования.

### ***Проведение эксперимента***

Проведен входной контроль уровней сформированности выделенных компонент исследовательских компетенций.

Преподавание дисциплины «Математические методы в психологии» реализовано в контрольной группе с применением традиционных методов обучения, в экспериментальной – с использованием методики ИВРИК.

Выполнен итоговый контроль уровней сформированности компонент исследовательских компетенций.

### ***Заключительный этап***

Обработаны данные итогового контроля уровней сформированности компонент исследовательских компетенций: проведена группировка данных, рассчитаны и проанализированы описательные статистики.

Проведен анализ эффективности применения методики «Индивидуальный вектор развития исследовательских компетенций» методом сравнения средних с использованием критерия Манна-Уитни.

## **Результаты и их обсуждение**

### ***Results and discussion***

Анализ результатов входного контроля, показал, что средние арифметические значения в баллах уровней сформированности компонент исследовательских компетенций в контрольной и экспериментальной группах (представлены в таблице 2) статистически значимо не различаются.

*Таблица 2. Средние арифметические значения уровней сформированности компонент исследовательских компетенций, балл*

*Table 2 Arithmetic mean values of the levels of formation of research competence components, point*

Группа	Средние значения уровня сформированности компонент исследовательских компетенций				
	А	В	С	Д	Е
контрольная	3,42	3,58	4,84	3,65	3,32
экспериментальная	3,65	3,75	4,7	3,8	3,25

Группировка курсантов в контрольной и экспериментальной группах по уровням сформированности каждой из компонент до исследования выявила одинаковую структуру изучаемых совокупностей курсантов. Для компонент А, В, D и Е в группах отсутствовали курсанты с высоким уровнем сформированности компонент компетенций. Большую часть составляли обучающиеся с низким уровнем сформированности компонент компетенций (доля таких курсантов в контрольной группе варьируется от 0,68 до 0,95, в экспериментальной – от 0,70 до 1). Для компоненты С максимальную долю составляли обучающиеся со средним уровнем сформированности компонент компетенций (0,53 в контрольной и 0,65 в экспериментальной группах), что можно объяснить опытом работы курсантов с прикладными компьютерными программами.

Основные количественные показатели, характеризующие результаты итогового контроля, представлены в таблице 3.

*Таблица 3. Количественные показатели результатов итогового контроля*  
*Table 3 Quantitative indicators of final control results*

Комп- нента	Контрольная группа		Экспериментальная группа		Наблюдаемое значение критерия Манна-Уитни при сравнении средних $U_{\text{набл.}}$	Значимость различий средних
	Среднее арифметическое значение $\bar{x}_{iК}$ , балл	Коэффициент вариации $k_{iК} = \frac{\sigma_{iК}}{\bar{x}_{iК}}$ , %	Среднее арифметическое значение $\bar{x}_{iЭ}$	Коэффициент вариации $k_{iЭ} = \frac{\sigma_{iЭ}}{\bar{x}_{iЭ}}$ , %		
А	5,95	23	7,15	19	103	значимы
В	6,21	21	7,65	18	93,5	значимы
С	7,79	17	7,7	19	182,5	не значимы
Д	6,42	24	7,85	16	97	значимы
Е	5,58	19	6,65	17	96	значимы

$\sigma_{iК}$ ,  $\sigma_{iЭ}$  – средние квадратические отклонения уровней сформированности компонент исследовательских компетенций в контрольной и экспериментальной группах соответственно

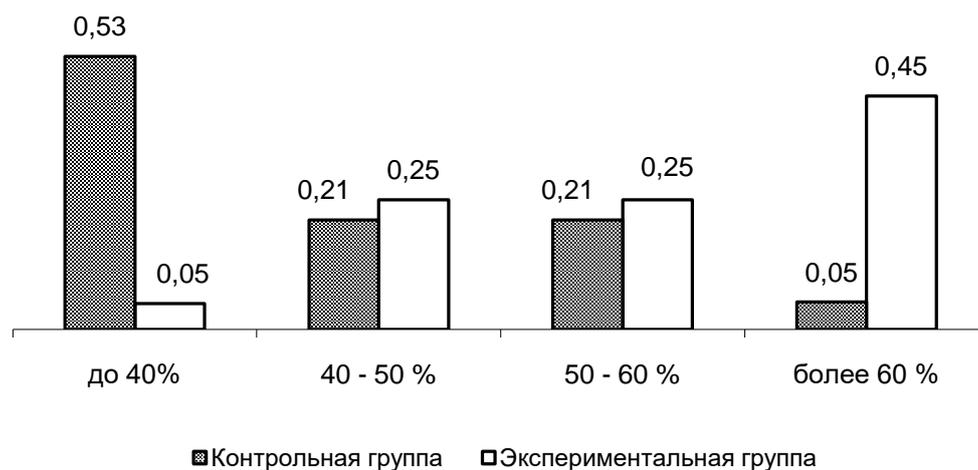
За период эксперимента абсолютный прирост средних баллов уровней сформированности компонент исследовательских компетенций составил контрольной группе от 2,26 (компонента Е) до 2,95 (компонента С) баллов, в экспериментальной – от 3,40 (компонента Е) до 4,05 (компонента D) баллов.

Сравнение средних значений в группах методом Манна-Уитни показало значимость различий по четырем компонентам компетенций А – способность формулировать цель работы, В – умение выбирать методы и способы выполнения работы или ее этапов, D – способность корректно

интерпретировать полученные результаты, Е – способность понимать область применения методов.

После проведения эксперимента изменилась структура групп курсантов по уровням сформированности каждой из компонент компетенций. В контрольной группе у большинства курсантов зафиксирован средний уровень сформированности компонент исследовательских компетенций (доля таких курсантов варьируется от 0,58 по компоненте D до 0,79 по компоненте E). В экспериментальной группе аналогичная структура выявлена по компонентам А и Е, для компонент С и D – большинство курсантов находится в группах с высоким уровнем (0,55 и 0,7 соответственно), по компоненте В число курсантов со средним и высоким уровнем одинаково. В обеих группах низкий уровень сформированности компонент зафиксирован у отдельных обучающихся.

Проведенное исследование показало, что методика ИВРИК позволяет получать более высокие результаты эффективности индивидуального продвижения по сравнению с традиционными методами преподавания.



*Рисунок 1. Распределение обучающихся по эффективности индивидуального продвижения*

*Figure 1 Distribution of students according to the effectiveness of individual promotion*

Среднее значение  $\eta$  в контрольной группе составило 42% ( $\eta_{\min_k} = 27\%$ ,  $\eta_{\max_k} = 73\%$ ), в экспериментальной – 57,8% ( $\eta_{\min_э} = 33\%$ ,  $\eta_{\max_э} = 79\%$ ). На рисунке 1 представлена диаграмма распределения курсантов контрольной и экспериментальной групп по величине  $\eta$ .

Рисунок 1 показывает, что наибольшая доля курсантов в контрольной группе продемонстрировала наименьший уровень эффективности продвижения, а в экспериментальной – наибольший.

## **Выводы** *Conclusions*

Методика «Индивидуальный вектор развития исследовательских компетенций» представляет собой комплексный метод, реализуемый в процессе подготовки пенитенциарных психологов и направленный на развитие их исследовательских компетенций.

Разработанный математический аппарат методики позволяет измерять индивидуальное развитие компетенций курсантов, сопоставлять и анализировать их достижения и на этой основе корректировать процесс обучения.

Проведенный педагогический эксперимент показал преимущество методики по сравнению с традиционными методами обучения.

Таким образом, методика ИВРИК является эффективным средством формирования и развития исследовательских компетенций курсантов-психологов ведомственных учебных заведений.

## **Summary**

Currently, the competence approach is a priority in training specialists in any professional field, including penitentiary psychologists. Successful practical and research activities of a psychologist correlate with the level of formation of research competencies, so the development of these competencies is the most important task of higher education.

The purpose of this article is to describe and statistically analyze the effectiveness of the «Individual vector of research competence development» methodology implemented in the educational process at the psychological faculty of the Vologda Institute of Law and Economics of the Federal Penal Service of Russia. IVDRC is based on the development of research competencies, professional orientation of training, author's methodological support of the studied discipline, individual approach to students, and the use of software tools in training.

Within the framework of IVDRC, a mathematical model of the «effectiveness of individual promotion» was developed, which is used for monitoring and analyzing the educational activities of cadets.

The article describes a pedagogical experiment that shows that the use of the IVDRC method allows you to get higher results of the level of formation of research competencies and the effectiveness of individual promotion in comparison with traditional methods of training.

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# ПЕДАГОГИЧЕСКАЯ РЕФЛЕКСИЯ КАК СПОСОБ ПРОФЕССИОНАЛЬНО-НАПРАВЛЕННОГО ФОРМИРОВАНИЯ СОЦИОКУЛЬТУРНОЙ КОМПЕТЕНЦИИ БУДУЩЕГО УЧИТЕЛЯ ИНОСТРАННОГО ЯЗЫКА

## *Pedagogical Reflection as a Method of Professionally-Oriented Formation of Socio-Cultural Competence at Future Foreign Language Teacher Training*

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**Abstract.** *The language policy focus on multilingualism and multicultural education necessitated to train a foreign language teacher who is able to teach students efficient cooperation in multilingual and multicultural environment. Young teachers face into difficulties when passing from the social role of a student to the social role of a teacher, so far as language training at university is to a greater extent subject-related rather than professionally-oriented. The main goal of the paper is to view vocational training peculiarities of future foreign language teachers from the perspective of socio-cultural approach. The article presents professionally-oriented ways of socio-cultural competence formation of a future teacher at a practical foreign language lesson. The author proves that the decisive condition to ensure the professional direction of socio-cultural competence formation is pedagogical reflection, which makes it possible to get students involved in the reflective development of the inner space of their future professional activity. The proposed system of tasks is aimed to involve students in the reflective analysis of their own strategies how to learn a foreign culture, their functional role in the process of education and, on the other hand, to make sense of the teacher's performance and the professional relevance of the educational process. As the way of evidence of the proposed tasks efficiency, the observation results on students at teaching practice and school teachers' survey data are given.*

**Keywords:** *future foreign language teacher, pedagogical reflection, professionally-oriented training, socio-cultural competence.*

### **Введение** *Introduction*

Современный образовательный контекст характеризуется актуализацией взаимосвязей образования и культуры, которая выступает в

качестве универсального механизма формирования личности, стремящейся к самореализации и обладающей чувством ответственности, способной взаимодействовать на равноправной основе с представителями своей и другой национальности, умеющей критически мыслить и ценить духовное и материальное богатство родной и иноязычной культуры.

Обучающиеся должны не только овладеть вербальным кодом иностранного языка и уметь его использовать практически, но и создать в своем сознании «картину мира», свойственную носителю этого языка.

В настоящее время к будущему учителю иностранного языка (далее – ИЯ) предъявляются новые требования, среди которых главными становятся не только методическая и предметная готовность, но и развитые интеллектуально-познавательные умения в сопоставлении и изучении языковых и культурных феноменов изучаемых языков, рефлексивные качества и навыки, творческое мышление, способность к исследовательской деятельности, умение предвидеть результаты собственной работы (Sorokoviyh & Kutepova, 2018).

В этих условиях актуализируются две взаимосвязанные проблемы – формирование социокультурной компетенции (далее – СКК) студента - будущего учителя иностранного языка, способного выступать в роли «медиатора культур», с одной стороны, и переосмысление подходов к формированию профессиональных умений, с другой стороны.

Одним из условий, позволяющим обеспечить профессионально-педагогическую направленность процесса овладения СКК, может стать развитие рефлексивных способностей студента.

Цель исследования – раскрыть дидактический потенциал педагогической рефлексии как способа профессионально-направленного формирования социокультурной компетенции будущих учителей ИЯ, а также обобщить представления о социокультурной компетенции как о структурном компоненте профессиональной деятельности учителя ИЯ.

### **Теоретические основы проблемы** *The theoretical background*

СКК как объект научных изысканий в лингводидактике является одним из самых частотных.

Появление термина «СКК» в российской методике обучения иностранным языкам соотносится с документами международной организации «Совет Европы по культурному сотрудничеству», и прежде всего с работами «Objectives for foreign language learning» Яна ван Эка (Ek Van, 1986) и «Threshold Level 1990» Яна ван Эка и Джона Трима (Ek Van & Trim, 1991). Согласно этим документам, СКК является одной из

составляющих коммуникативной компетенции, понимаемой как способность к адекватному взаимодействию в ситуациях повседневной жизни, установлению и поддержанию социальных контактов при помощи иностранного языка. Основу СКК составляет «знание социокультурного контекста, в котором изучаемый язык используется его носителями, а также того, как этот контекст влияет на выбор и коммуникативный эффект употребления определенных лингвистических форм» (Ek Van, 1986). В 1991 году понятие было интерпретировано как аспект коммуникативной способности, включающий специфические черты общества и культуры, проявляющиеся в коммуникативном поведении членов данного общества (Ek Van & Trim, 1991).

В российской науке накоплен значительный опыт исследования проблемы соизучения языка и культуры, в том числе и применительно к формированию СКК. Анализ работ в области теории и методики преподавания иностранных языков показывает, что в фокусе внимания исследователей находились следующие вопросы:

- формирование СКК у студентов неязыковых направлений: Юриспруденция, Культурология, Экономика, Лечебное дело, Психология, технические специальности и др.;
- формирование СКК у учащихся разных типов школ;
- формирование СКК на основе различных средств обучения: Интернет-ресурсов, социальных серверов, спутникового телевидения, информационно-коммуникационных технологий, образовательной среды Moodle, видеосюжетов, прагматических и поэтических текстов, аутентичного песенного материала.

Количество исследований применительно к формированию СКК в профессиональном плане у студентов - будущих учителей ИЯ незначительно. Можно выделить работы Санниковой С.В. (Sannikova, 2006), Рыченковой Л.А. (Rychenkova, 2008), Перовой А.К. (Perova, 2010).

В данных работах доказывается важность интеграции социокультурного компонента в контекст профессионально-методической подготовки будущих учителей иностранного языка. При этом целью формирования СКК студентов является «развитие личности, способной выйти за пределы своей культуры и осуществлять функции медиатора культур, не утрачивая собственную идентичность» (Rychenkova, 2008, p.147).

Учитель – медиатор культур рассматривается как учитель, который «умеет строить процесс обучения в соответствии с современными требованиями к языковому образованию и реализовывать социокультурное образование школьников на основе идей диалога культур, межкультурной

толерантности, адекватного восприятия культурных различий при сохранении ценностного отношения к своей культуре» (Pegova, 2010, p.337).

Санникова С.В., формулируя понятие СКК учителя иностранного языка, акцентирует особое внимание на таких профессионально-значимых качествах учителя, как коммуникативность, эмпатия и толерантность (Sannikova, 2006).

Не ставя перед собой цель детального описания структурного состава СКК будущего учителя иностранного языка, на основе теоретико-методологического анализа исследований назовем кратко ее базовые компоненты:

- когнитивный, включающий системные знания о культуре страны изучаемого языка и родной культуры, а также умения адекватно использовать данные знания в ситуациях межкультурного общения;
- аксиологический, включающий ценностные установки уважительного отношения к чужой культуре, непредвзятости в ее восприятии и оценивании;
- эмоциональный, включающий личностные качества – наблюдательность, эмпатия, толерантность, открытость и готовность к общению;
- лингводидактический, включающий способность анализировать и отбирать социокультурный материал в учебных целях, использовать наиболее эффективные технологии для формирования СКК обучающихся.

В теории и практике высшего педагогического образования принципиально важным является осознание значимости профессионально-педагогической направленности преподавания дисциплин не только педагогического, но и предметного блока.

Профессионально-педагогическая направленность рассматривается нами, вслед за Саломатовым К.И., как методический принцип, реализация которого оказывает активное воздействие на все элементы процесса обучения иностранному языку как будущей специальности и служит средством опосредованной методической подготовки студентов (Salomatov, 1984). Реализация данного принципа создает условия для осознания выполнения учебных действий с профессионально-ориентированной позиции.

Чтобы стать квалифицированными педагогами, студенты должны прежде всего осознать свой собственный опыт изучения иностранного языка. Как известно, «человек учит так, как учили его, а не так, как его учили учить». Обычно основное внимание обучающихся направлено на его

содержание, а не на сам процесс усвоения знаний. Но есть средства, помогающие сделать этот процесс более сознательным.

На наш взгляд, педагогическая рефлексия может выступать как один из факторов, позволяющих обеспечить оптимальное взаимосвязанное формирование социокультурной и профессиональной компетенций.

Педагогическая рефлексия рассматривается рядом ученых как сложный психологический феномен, проявляющийся в способности учителя занимать аналитическую позицию по отношению к своей деятельности, к себе как ее субъекту с целью анализа, осмысления оценки ее эффективности и прогнозирования ее дальнейшего развития (Bizyaeva, 2004).

В системе профессиональной подготовки будущего учителя иностранного языка опыт развития педагогической рефлексии пока невелик. Рядом ученых предпринимались попытки представить рефлексивные методики, включающие рефлексивные приемы в процесс изучения ИЯ (Solovova, 2004). Мелехова Ю.Б. определяет рефлексивную позицию будущего учителя как «осознанную систему оценочных отношений личности к себе как к будущему учителю иностранного языка, к участнику педагогического взаимодействия, к профессии «Учитель», к предмету «Иностранный язык», основанную на имеющемся рефлексивном опыте личности и обеспечивающая ее обогащение» (Melekhova & Sajgushev, 2019, p.16).

В данной работе представлены дидактические возможности практического занятия по иностранному языку, позволяющие вовлекать студента в рефлексивное освоение «внутреннего пространства» их будущей профессиональной деятельности. Именно практическое занятие по иностранному языку, на наш взгляд, может обеспечить наиболее успешно профессионально-педагогическую ориентацию социокультурной компетенции учителя иностранного языка через рефлексивное осознание студентами их совместной деятельности с преподавателем вуза в процессе познания иноязычной культуры.

### **Методические основы исследования** ***Research methodology***

С целью получить более четкое представление об особенностях рефлексии в профессионально-личностном опыте студентов – будущих учителей, нами было проведено анкетирование среди студентов 5 курса (23 студента), обучающихся по направлению 44.03.05 Педагогическое образование (с двумя профилями подготовки), профиль «Иностранные языки».

Анкета включала в себя 4 серии вопросов, целью которых было выяснить:

1. что «оседает» в памяти студентов в отношении приемов и способов овладения материалом и имеет ли место видение этих приемов;
2. в какой мере студенты понимают идею адекватности приемов поставленной задаче;
3. в какой мере студенты видят методическое своеобразие языкового материала;
4. какова их собственная эмоциональная реакция на определенные задания.

Результаты проведенного анкетирования позволили сделать следующие выводы:

- осознание способов овладения материалом имеет место, однако студенты весьма слабо представляют себе сущностные стороны приемов, используемых преподавателем;
- имеющиеся у некоторых студентов представления в большей мере являются пока отражением их интуитивно-эмпирического опыта, что не позволяет признать наличие у них профессиональной рефлексии как сформированного качества личности;
- у большинства студентов наблюдаются рефлексивные проявления, что является прямым или опосредованным отражением накопленного ими учебного опыта, однако их диапазон и направленность нельзя признать достаточными.

Результаты проведенного анкетирования, а также наш опыт преподавания иностранного языка показывает, что студенты не всегда могут осуществить перенос приемов действий, которые они наблюдали в течение многих лет в вузе, в школу. Одну из причин мы видим в том, что даже там, где применяются рациональные приемы, студенты не осознают выполняемые на занятии действия как профессионально релевантные, поскольку перед ними не ставится задача анализировать свою деятельность и действия преподавателя, оценить приемы, на основе которых они овладевают иностранным языком, посмотреть на них со стороны. Для студентов важен результат, правильный ответ. Система же действий, которая приводит к этому результату, ими или совсем не осознается или осознается недостаточно. Необходимое осознание возникает тогда, когда студент на собственном опыте убеждается в том, что результативность его деятельности зависит и от особенностей самого процесса усвоения, от способов его осуществления.

Другую причину мы видим в том, что студенты недостаточно самостоятельны в организации учебного общения, так как организатором

занятия является преподаватель, т.е. организационно-структурная часть является заданной извне.

Процесс формирования СКК на практическом занятии по иностранному языку включает разнообразные задания и приемы, направленные на осмысление собственного социокультурного опыта и знаний, на осознанное сравнение и анализ культурно-специфических понятий, поиск путей преодоления ситуаций непонимания и т.п.

Однако практика обучения свидетельствует о том, что все действия, направленные на овладение чужой культурой, происходят неосознанно в плане постановки целей, путей их решения, использования приемов. Таким образом, процесс овладения иноязычной культурой остается «закрытым» в плане становления профессиональной компетенции студентов.

Правомерно возникает вопрос о том, каким образом научить студентов размышлять, четко дифференцировать две стороны познания иноязычной культуры – «для себя» и «для других», т.е. осознать свою профессиональную роль как будущего учителя.

Запуск и развитие механизма профессиональной рефлексии будущего учителя возможно осуществить через особую систему заданий, позволяющих вовлекать студентов в рефлексивный анализ своих действий, установок, взглядов – равно как и действий преподавателя.

Основой для рефлексивного «выхода» могут служить проблемно-поисковые вопросы культуроведческого характера. Условно можно разделить весь процесс на три этапа.

Первый этап связан с постановкой преподавателем задачи, заключающей в своем содержании определенную социокультурную проблему, противоречие.

Далее представим на одном из примеров ход возможной работы. Так, представленный ниже диалог содержит социокультурную ошибку в использовании конвенциональной формулы „*Wie geht es?*“ (Как дела?). Задача студентов состоит в поиске частей диалога, препятствующих социокультурным нормам в немецкоязычной культуре и обоснованию возможных причин таких ошибок.

*Finden Sie heraus, welche Dialogteile nicht angebracht sind.*

*Benennen Sie die Gründe.*

*Im Fundbüro.*

*Kunde: Herr Özdemir (Ö); Angestellter: Herr Nagel (N)*

*Ö: Guten Tag. Wie geht es?*

*N. Danke, gut. Kann ich Ihnen helfen?*

*Ö: Ja, bitte. Ich habe gestern meinen Regenschirm in der U-Bahn vergessen.*

*N: Na, dann wollen wir mal sehen.*

В центре внимания оказывается способность видеть и вскрывать лежащее в основе задачи противоречие, а также способность к логическому обоснованию сущности проблемы использования конвенциональной формулы «*Wie geht es?*» и моделирование собственных путей ее решения.

Так, студенты, пытаясь ответить на поставленный преподавателем вопрос, актуализируют свои предварительные знания относительно употребления различных разговорных формул в немецкой культуре, «всматриваются» в каждую реплику. Причем внутренний диалог может принимать и внешнюю форму, если решение проблемы осуществляется в форме групповой работы.

Мы полагаем, что именно групповое учебное взаимодействие в наибольшей степени формирует умения, релевантные для СКК, моделируя реальные ситуации межкультурного общения, а также обладает серьезным профессиональным потенциалом, раскрывая опосредованно (через рефлексивные действия) перед студентами одну из возможностей управления учебной деятельностью в школе (Smirnova & Maslova, 2018).

Второй этап моделирует педагогическую ситуацию оказания «помощи» преподавателем, рефлексивный «сценарий» которой и предлагается сделать студентам на третьем этапе.

Второй этап по существу представляет собой весь последующий ход работы по овладению системой конвенционально установленных правил использования «*Wie geht es?*» - это работа с карикатурой, комиксом, составление раstra, коррекция диалога и работа с отрывком из художественного текста. Таким образом, преподаватель, воздействуя опосредованно, через специальный набор приемов, направляет внимание студентов в определенное русло, не ограничивая при этом степень их самостоятельности.

На данном этапе студенты не осознают в достаточной степени целесообразности используемых преподавателем путей и средств, которые подводят их к решению задачи, поскольку их мыслительная деятельность направлена на разрешение проблемной ситуации.

Третий этап направлен непосредственно на выявление способности студента к рефлексивному анализу: а) своих мыслительных действий, б) действий преподавателя.

После выполнения задания студентам предлагается мысленно вернуться к его началу и попытаться ретроспективно проанализировать свой ход решения, опираясь при этом на фразы-стимулы, направляющие и поддерживающие рефлексивный процесс, а также отрефлексировать последовательность шагов преподавателя (Табл.1). Таким образом фиксируется и анализируется совместная деятельность студентов и преподавателя.

Таблица 1. Схема рефлексивного анализа  
Table 1 The scheme of reflexive analysis

Попробуйте проанализировать последовательность шагов	
Вашей деятельности:	деятельности преподавателя:
<ul style="list-style-type: none"> <li>- Ваш первый логичный шаг был ...</li> <li>- После этого Вы сделали/ сравнили/ выделили/ обнаружили ...</li> <li>- Затем Вы обратили внимание, что...</li> <li>- Это навело Вас на мысль, что ...</li> <li>- Вы вспомнили, что ...</li> <li>- Что Вы хотели достичь?</li> <li>- Вам удалось?</li> <li>- Как Вы это узнали?</li> <li>- Вы правильно сделали?</li> <li>- Для чего Вы это делали?</li> </ul>	<ul style="list-style-type: none"> <li>- На что обратил внимание преподаватель в первую очередь?</li> <li>- Что рекомендовал/ предложил?</li> <li>- Как Вы думаете – для чего?</li> <li>- Как помог Вам преподаватель двигаться дальше?</li> <li>- Какие ориентиры преподавателя помогли Вам?</li> <li>- Что не помогло? Почему?</li> <li>- Как отреагировал преподаватель?</li> </ul>

Полученная в результате запись этапов решения представляет собой своеобразный протокол рефлексивного самоотчета, обращенного на анализ и осмысление. Результат выполнения задания содержит достаточно рельефную проекцию рефлексивных свойств профессионального мышления будущего учителя, которые проявляются в способности «входить» в специфику действий преподавателя и своих ответных реакций.

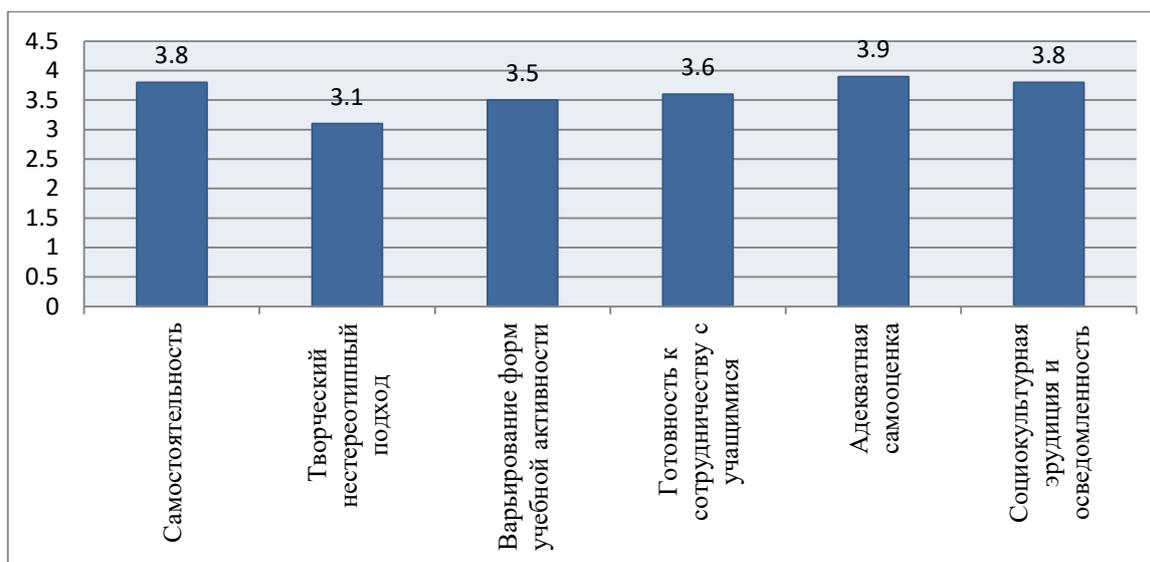
Возможно и использование других заданий, когда будущий учитель выполняет различные упражнения, побуждающие к самоанализу и осмыслению своих действий, т.е. практически занимается аутотренингом своей профессиональной рефлексии. К ним можно отнести такие задания как фиксированное наблюдение, создание «листка самооценки», письменный опрос в форме анкеты или граффити к стимульным словам, создание группового плаката или проекта, рефлексивные карты, денотатные графы и т.п. Достаточно эффективными являются такие приемы, как «песочные часы», эссе, читательские дневники, дидактические стихи (синквейн, даймонд, контраст и др.) (Kruze, 2010).

Логическим продолжением явился анализ результатов педагогической практики студентов, что позволило в определенной мере расширить границы нашей работы и одновременно более отчетливо увидеть ее результаты. Целью проведения такого отсроченного среза была необходимость узнать, насколько те приемы, которые мы использовали при проведении опытного обучения, могут быть экстраполированы студентами на их профессиональную деятельность (осознанно или неосознанно).

С этой целью было проведено анкетирование среди учителей немецкого языка школ г. Пскова (9 учителей), которые осуществляли руководство педагогической практикой студентов. Им предлагалось

определить наличие и степень выраженности следующих показателей у студентов - практикантов: самостоятельность, творческий нестандартный подход, варьирование форм учебной активности (групповая, парная работа), готовность к сотрудничеству с учащимися, адекватная самооценка, социокультурная эрудиция и осведомленность. Данные показатели оценивались следующим образом: 4 - ярко выражен, 3 - проявляется всегда, 2 - проявляется редко, 1 - не проявляется.

В результате проведенного анкетирования были получены следующие данные (Рис. 1).



*Рисунок 1. Результаты оценивания*  
*Figure 1 The results of evaluation*

Таким образом, мнение учителей немецкого языка позволяет нам предположить, что студенты в достаточной степени осознали приемы работы, осуществляемые нами в ходе обучения немецкому языку, и смогли осуществить положительный перенос на профессиональную деятельность.

### **Выводы** **Conclusions**

Выводы по итогам исследования дают основание говорить о целесообразности включения элементов педагогической рефлексии в практику формирования СКК будущих учителей ИЯ. Тем самым СКК изначально формируется как профессионально значимый компонент деятельности учителя ИЯ на основе рефлексивного осознания собственных путей овладения иноязычной культурой.

Результаты проведенного исследования показали положительное влияние на профессионально релевантный выбор студентами способов и методов в будущей педагогической деятельности, позволили экстраполировать освоенные ими в процессе изучения чужой культуры приемы в практику обучения ИЯ в школе.

Вместе с тем, следует отметить, что данный формат профессионализации процесса изучения ИЯ требует длительных временных затрат и может быть эффективен только при условии постоянных и целенаправленных усилий всех участников образовательного процесса – студента и преподавателя.

### **Summary**

The foreign and Russian methods of teaching foreign languages have accumulated considerable experience in studying the problems of interrelated language and culture learning. The research focuses on the formation of socio-cultural competence among schoolchildren and students based on information and communication technologies, authentic materials, etc.

In the scientific research devoted to the formation of socio-cultural competence of future foreign language teachers, the special importance of integrating the socio-cultural component in professional and pedagogical training is emphasized. A foreign language teacher is understood as a cultural mediator who is able to implement socio-cultural education based on the ideas of cultural dialogue, intercultural tolerance and adequate perception of cultural differences. The basic components of the socio-cultural competence of a foreign language teacher include: cognitive, axiological, emotional, and linguodidactic.

The professional and pedagogical orientation of teaching a foreign language at the university is considered as a special methodological principle, focused on the maximum inclusion of the professional component in the discipline of not only the pedagogical, but also the foreign language block.

The decisive condition for ensuring the professional orientation of the formation of socio-cultural competence is pedagogical reflection, which allows the student to be involved in the reflective development of the internal space of their future professional activity.

In a practical lesson, students are included in a reflexive analysis of their own strategies for learning a foreign culture, their functional role in the educational process, and the professional relevance of the teacher's actions.

The basis for pedagogical reflection is the problem-search questions aimed at solving the socio-cultural problem.

As a result of such training, the reflexive properties of pedagogical thinking are developed, which allow students to transfer their experience to future professional activities. Observations of students in the process of teaching practice and school teachers' survey confirm the effectiveness of including elements of pedagogical reflection in the process of mastering foreign language culture.

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## ОЦЕНКА И РАЗВИТИЕ БИЗНЕС-КОМПЕТЕНЦИЙ

### *Business Competences Estimation and Development*

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**Abstract.** Taking into consideration at the present business environment of the Russia, as well as its geographical position and the historical background, it is important to make use of these conditions for estimation and further development business competences at the universities of Russia. The object of the present research paper is business competences, the subject of the research paper is estimation of the business competences of Russia and the development them in the study process at the higher education organizations in Russia. The objective of the research paper is to study the integration process of students and academic staff representing Russian higher education organizations in formation of business competences in Russia, to elucidate the factors influencing the business competences, to develop proposals for estimation and improvement of business competences in Russia. Research methods: reported analysis of business competences, higher education organizations in Russia, study of correlation between business environment factors and business competences, economic and statistical analysis of the universities results, economic experiment, studying of public and non - governmental institutions data in Russia. The present paper includes further development of study on the contents of business competences, factors influencing it, higher education theory and policy.

**Keywords:** academic staff, business competences, business environment factors, higher education organizations, improvement, students, Russia.

### **Введение**

#### ***Introduction***

Масштабные социально-экономические преобразования и стремительные темпы научно-технического прогресса в современном мире обусловили необходимость единого пространства высшего образования, что потребовало разработки новой парадигмы преподавания и обучения и вызвало глубокие перемены в университетах. Механизмом формирования новой парадигмы высшего образования стал Болонский процесс, к которому с сентября 2003 года присоединилась Россия.

Ключевую роль в новой образовательной парадигме играет компетентностный подход, который пришел на смену традиционному

подходу, базирующемся на триаде «знания – умения – навыки». В современной жизни именно компетенции, которыми обладает человек, определяют его уровень доходов, материальное благосостояние, общественное положение, статус, и, в конечном счете, его возможности самореализации и удовлетворенность жизнью.

На формирование учебных планов в российских вузах в последние годы оказывают заметное влияние: 1) общая кризисная ситуация в экономике; 2) конкуренция на рынке труда и насыщение внутреннего рынка по некоторым специальностям; 3) демографическая ситуация, характеризующаяся сокращением потенциального контингента студентов вузов; 4) изменение интересов молодежи, проявляющееся разнородных тенденциях, например, в снижении престижа высшего образования как необходимого условия для достижения материального благополучия и общественного признания и в стремления к получению высшего образования за рубежом; 5) возросшая конкуренция между вузами, одним из направлений которой является конкуренция государственных и негосударственных учебных заведений; 6) изменение требований и условий работы работников вузов, прежде всего, преподавательского состава.

В описанных выше условиях вузы должны формировать у студентов компетенции, которые обеспечивали бы им возможность занять достойное место в жизни. Решение этой задачи требует анализа имеющегося опыта и возможностей его адаптации к новым условиям.

Цель настоящего исследования заключалась в оценке учебных планов российских университетов с точки зрения формирования бизнес-компетенций обучающихся.

### **Обзор литературы** *Review of the Literature*

Компетентностный подход к образованию имеет глубокие корни в человеческой истории, о чем пишет в своей работе Н.В. Евдокимова (Evdokimova, 2019). В своих работах Т. Лобанова и Ю. Шунин (Lobanova & Šunins, 2009), И. Спича, Э. Спичс и Б. Берзиня (Spīča, Spīcs, & Bērziņa, 2018) провели анализ современного состояния процесса формирования компетенций в сфере образования и дали обзор исследований, посвященных этим вопросам. Однако, как отмечает И.Б. Дуракова, исследовательская база для выводов о результатах реализации компетентностного подхода в разных странах и учебных заведениях в привязке к требованиям работодателей и представлениям молодых людей о карьере, находится в процессе формирования, что затрудняет работу по определению перспективных

моделей университетов и возможностей их адаптации к российским условиям (Durakova, 2018).

Следует отметить, что многие исследователи отмечают отсутствие единого понимания компетенции, что, с одной стороны, дает возможности для широкого спектра теоретических изысканий, а с другой стороны, становится препятствием для выработки практических мер. Например, отмечая отсутствие общепринятого определения, С.В. Русина и Н.А. Алексеева трактуют компетенции как «заранее задаваемые нормы, являющиеся ожидаемым результатом обучения каждому конкретному предмету, включающие в себя социально значимые качества» (Rusina & Alekseeva, 2008). Такая трактовка согласуется с Федеральными государственными образовательными стандартами высшего образования, которые в явном виде формулируют компетенции как результаты обучения. Эксперты Международного форума труда отмечают, что «значение имеют не отдельные компетенции, а их набор» (SPbSU, 2019) и ставят вопрос о возможности замены в близком будущем понятия «профессия» списком компетенций (SPbSU, 2019).

И.А. Заярная описывает компетентностную парадигму высшего образования, характеризуя ее как «основанную на формировании у студентов определенных компетенций и диагностировании уровня компетенций специалистов-выпускников вузов как результата высшего образования» (Zayarnaya, 2014).

Стремление более четко связать понятие компетенции с жизненными перспективами выпускников вузов привело к появлению понятия бизнес-компетенции, которое разработали и ввели в научный обиход Р. Гарлея (Garleja, 2009), А. Ведля (Vedļa, 2009), И. Спича, Э. Спичс и Б. Берзиня (Spīča, Spīčs, & Bērziņa, 2018). И. Спича, Э. Спичс и Б. Берзиня (Spīča, Spīčs, & Bērziņa, 2018) дают следующее определение этого понятия: «бизнес-компетенции это совокупность меняющихся во времени и пространстве профессиональных компетенций в сочетании с предприимчивостью и деловитостью личности, которые обеспечивают получение прожиточных средств в переменной бизнес-среде».

Компетентностный подход предполагает использование в высшей школе иной, отличной от традиционной, системы оценки результатов. Для выявления уровня владения компетенциями А.Б. Хуторской предлагает применять комплекс, объединяющий: 1) систему оценки продукта, созданного студентом при выполнении учебных заданий, работ, проектов; 2) систему оценки деятельности студента - её качества, полноты, результативности, эффективности; 3) систему самооценки (Khutorskoy 2017).

Исследователями ведется активный поиск возможностей повышения эффективности компетентностного подхода в университетах. Например, А.Б. Хуторской указывает, что культурологический, гуманитарный, информационно-коммуникативный, метапредметный, эвристический продолжают оставаться актуальными (Khutorskoy, 2017). Х. Лозано, А. Аристизабал, Х. Перис и А. Уэсо (Lozano, Aristizábal, Peris, & Hueso, 2012) проведен критический анализ компетентностной концепции, описаны ограничения и недостатки компетентностного подхода и возможности их преодоления в сфере высшего образования с помощью подхода, основанного на возможностях.

### **Методы исследования** *Methods of the Research*

В качестве методической основы работы была использована методика, авторами которой являются И. Спича, Э. Спичс и Б. Берзиня (Spīča, Spīcs, & Bērziņa, 2018), модифицированная в соответствии с условиями проведения настоящего исследования.

Для оценки компетенций, сформированных у выпускников вузов, были проанализированы результаты самообследования 5 групп выпускников Санкт-Петербургского политехнического университета, получивших дипломы по экономическим специальностям после прохождения обучения в очной форме, и имеющих разный стаж работы после получения диплома (табл. 1). Все участвовавшие в самообследовании выпускники работают в соответствии с полученной специальностью (в том числе, в собственном бизнесе) и/или занимаются преподавательской деятельностью.

*Таблица 1. Характеристики групп выпускников, участвовавших в самообследовании*  
*Table 1 Graduate groups participating in self-examination*

№ группы	Степень обучения	Направление (специальность)	Число обследованных	Стаж работы после получения диплома
1	Бакалавриат	Экономика (Мировая экономика и международные экономические отношения)	2	До 10 лет
2	Бакалавриат	Экономика (Финансы и кредит)	2	От 10 до 20 лет
3	Магистратура	Экономика (Финансы и кредит)	3	От 10 до 20 лет
4	Специалитет	Экономика (Финансы и кредит)	6	От 20 до 30лет
5	Магистратура	Экономика (Менеджмент)	2	От 20 до 30лет

Участникам обследования было предложено оценить дисциплины, изученные в университете, с точки зрения их полезности в практической деятельности участника по шкале от 1 до 10 (в порядке возрастания полезности). Списки дисциплин были составлены на основании приложений к дипломам. Курсовые работы и проекты оценивались как составная часть соответствующей дисциплины, практики и защита выпускной работы не оценивались.

Дисциплины были разбиты на два блока: профессиональные (П), к которым отнесены дисциплины прямо связанные с экономикой и менеджментом, и общеобразовательные (О), к которым отнесены все прочие дисциплины.

Дисциплины были ранжированы на основе средних арифметических значений оценок, данных участниками обследования. При этом предполагалось, что дисциплины, получившие среднюю оценку в диапазоне от 6 до 10 баллов, были полезными с точки зрения формирования бизнес-компетенций, а дисциплины с балльными оценками от 1 до 5 оказались малополезными.

## **Результаты** **Results**

В таблицах 2-6 приведены результаты ранжирования дисциплин на основании средних оценок, данных отдельными группами выпускников.

В таблице 2 видно, что из 42 дисциплин, изученных участниками группы 1, полезными с точки зрения формирования бизнес-компетенций признаны 28 (66.7%). В числе дисциплин, получивших наиболее высокую оценку, находятся экономико-финансовые дисциплины, входящие в профессиональный блок, и иностранные языки.

Из дисциплин общеобразовательного модуля полезными признаны «Статистика», «Право» и «Безопасность жизнедеятельности». В числе дисциплин, признанных малополезными присутствуют дисциплины профессионального блока.

Таблица 3 показывает, что выпускники группы 2 сочли полезными более широкий список общеобразовательных дисциплин, чем участники группы 1, а в список малополезных попал ряд дисциплин профессионального блока. Доля дисциплин, полезных для формирования бизнес-компетенций составила 76%. В числе малополезных оказались дисциплины, ориентированные на узкую профессиональную область. Сопоставляя бакалаврские программы, дисциплины которых оценивали группы 1 и 2, можно отметить значительное различие в числе дисциплин в учебных планах.

Таблица 2. Ранжирование дисциплин Санкт-Петербургского политехнического университета по уровню формирования бизнес-компетенций (Группа 1)  
 Table 2 Rating of Disciplines According to Formation of Business Competences at the St. Petersburg Polytechnic University (Group 1)

Балл	Дисциплины	Число дисциплин	Доля дисциплин, %
10	П: Корпоративные финансы; Макроэкономика; Макроэкономическое планирование и прогнозирование; Международный бизнес; Международный маркетинг; Международный менеджмент; Микроэкономика; Мировая экономика и международные экономические отношения; Основы маркетинга; Основы международного бизнеса; Рынок ценных бумаг; О: Иностранный язык, англ., базовый курс; Иностранный язык, англ., профессионально ориентированный курс; Немецкий язык; Статистика	15	35.7
9	П: Бухгалтерский учет; Информационные системы в экономике	2	4.8
8	П: Анализ и аудит; Деньги, кредит, банки; Документационное обеспечение экономики; Методы оптимальных решений; Национальная экономика; Налогообложение	6	14.3
7	П: История экономических учений О: Право	2	4.8
6	П: Внешнеэкономическая деятельность предприятия; Экономическая география О: Безопасность жизнедеятельности;	3	7.1
1 -5	П: Сравнительный менеджмент; Личностные основы управленческой деятельности; Логистика; Организация и проведение рекламы О: Введение в регионоведение; Деловая этика; История; Конфликтология; Линейная алгебра; Математический анализ; Организационное поведение; Основы теории информации; Социально-педагогическое проектирование; Социология	14	33.3

Анализ результатов опроса группы 3 (табл. 4), показывает отсутствие единодушия в оценках полезности дисциплин. Как следствие, ни одна дисциплина не получила оценку выше 8 баллов. Доля малополезных дисциплин, указанная этой группой оказалась наиболее высокой и составила 40% (8 дисциплин из 20). В числе таких дисциплин оказались

дисциплины профессионального блока, посвященные относительно узким практически ориентированным вопросам: управлению государственными закупками, платежным системам России, валютному контролю и валютному регулированию, управлению банковским капиталом. Можно отметить профессиональную ориентированность учебного плана, что проявляется в малом числе общеобразовательных дисциплин (2 из 20).

*Таблица 3. Ранжирование дисциплин Санкт-Петербургского политехнического университета по уровню формирования бизнес-компетенций (Группа 2)*  
**Table 3 Rating of Disciplines According to Formation of Business Competences at the St. Petersburg Polytechnic University (Group 2)**

Балл	Дисциплины	Число дисциплин	Доля дисциплин, %
10	П: Экономико-математические методы; Эконометрика; Бухгалтерский учет; Маркетинг; Менеджмент; Финансы; Экономический анализ; Инвестиции; Финансовый менеджмент; Финансы организаций (предприятий) О: Иностранный язык; Психология и педагогика; Высшая математика; Теория вероятностей; Статистика	15	30.6
9	П: Макроэкономика; Микроэкономика; Рынок ценных бумаг	3	6.1
8	П: История экономических учений; Мировая экономика; Экономика организаций (предприятий); Деньги, кредит, банки; Налоги и налогообложение; Методы анализа финансовых рынков; Основы контроллинга; Проектное финансирование; Ценообразование О: Этика делового общения; Правоведение; Социология;	12	24.5
7	П: Страхование О: Информатика	2	4.1
6	П: Экономика природопользования; Информационные технологии в экономике; Внешнеэкономическая деятельность; Международные финансы; Управление качеством	5	10.2
1 - 5	П: Бюджетная система РФ; Банковский аудит; Банковский менеджмент; Финансы предприятий бюджетной сферы; Организация государственного и муниципального управления О: Культурология; Отечественная история; Физическая культура; Философия; Концепции современного естествознания; Основы защиты информации, составляющей государственную тайну; Безопасность жизнедеятельности	12	24.5

Состав дисциплин, изученных выпускниками группы 4 (табл. 5), оказался наиболее эффективным с точки зрения формирования бизнес-компетенций: почти 90% дисциплин признаны полезными. Максимальную оценку не получила ни одна дисциплина из 48. В число малополезных вошли всего 5 дисциплин, причем среднее квадратичное отклонение оценок их полезности значительно – от 2.9 до 3.4. Следует заметить, что дисциплины общеобразовательного блока представлены и на всех уровнях оценок от 6 до 9, причем разброс оценок по некоторым из них превышает величину разброса в группе «малополезных». Так, среднее квадратичное отклонение оценок дисциплин «Этика поведения» и «Психология делового общения» составляет 3.7 и 3.6 соответственно. На уровне оценки 6 баллов дисциплины общеобразовательного блока составляют большинство.

*Таблица 4. Ранжирование дисциплин Санкт-Петербургского политехнического университета по уровню формирования бизнес-компетенций (Группа 3)*  
**Table 4 Rating of Disciplines According to Formation of Business Competences at the St. Petersburg Polytechnic University (Group 3)**

Балл	Дисциплины	Число дисциплин	Доля дисциплин, %
8	П: Теория финансов; Управление финансовыми рисками; Оценка имущества предприятий; Анализ финансово-хозяйственной деятельности; Управление стоимостью предприятия; Финансовое управление инвестиционными программами; Финансовая стратегия на рынке ценных бумаг	7	35.0
7	П: Ипотечное кредитование; Финансово-кредитные методы регулирования экономики	2	10.0
6	П: Основы аудита; Международные стандарты финансовой отчетности; Финансы страховых организаций	3	15.0
1 - 5	П: Управление государственными закупками; Экономика инноваций; Валютный контроль и регулирование; Платежные системы РФ; Анализ финансового положения кредитной организации; Управление банковским капиталом О: Политология; Управление персоналом	8	40.0

Таблица 5. Ранжирование дисциплин Санкт-Петербургского политехнического университета по уровню формирования бизнес-компетенций (Группа 4)

Table 5 Rating of Disciplines According to Formation of Business Competences at the St. Petersburg Polytechnic University (Group 4)

Балл	Дисциплины	Число дисциплин	Доля дисциплин, %
9	П: Налогообложение; Маркетинг; Анализ финансово-хозяйственной деятельности; Аудит; Финансовый менеджмент; Экономический анализ О: Иностранный язык; Информатика и программирование	8	16.7
8	П: Анализ инвестиционных проектов; Теория финансов и кредитования; Банковское дело; Бухгалтерский учет; Финансовые рынки; Ипотечное кредитование; Стратегия экономического управления предприятием; Страхование; Оценка имущества предприятий; Производственный менеджмент; Международные экономические отношения; Внешнеэкономическая деятельность; Бюджетная система; Управление персоналом; О: Высшая математика; Теория вероятностей;	16	33.3
7	П: Ценообразование; Математические методы в экономике; Макроэкономика; Микроэкономика; Социально-психологические основы управления; Правовое обеспечение внешнеэкономической деятельности; Научно-исследовательская работа студента; О: Статистика; Информационные технологии; Интегральные и информационные системы; Психология делового общения	11	22.9
6	П: История экономических учений; Основы контроллинга О: Этика поведения; Теория систем и системный анализ; Делопроизводство и корреспонденция; Социология; Физическая культура; История	8	16.7
1 -5	П: Экология и экономика природопользования О: Философия; Изобразительное искусство; Безопасность жизнедеятельности; Политология;	5	10.4

Заслуживает внимания, что уровень оценок полезности дисциплин профессионального блока убывает по мере сужения сферы их практического применения. Оценку 9 баллов получили дисциплины «Анализ финансово-хозяйственной деятельности», «Финансовый менеджмент» и «Налогообложение», имеющие более широкую сферу применения, чем дисциплины, получившие оценку 8 баллов «Анализ инвестиционных проектов», «Банковское дело», «Финансовые рынки», «Ипотечное кредитование». Оценку 7 баллов получили «Ценообразование» и фундаментальные теоретические дисциплины – «Макроэкономика» и «Микроэкономика», оперирующие идеализированными моделями.

*Таблица 6. Ранжирование дисциплин Санкт-Петербургского политехнического университета по уровню формирования бизнес-компетенций (Группа 5)*  
**Table 6 Rating of Disciplines According to Formation of Business Competences at the St. Petersburg Polytechnic University (Group 5)**

Балл	Дисциплины	Число дисциплин	Доля дисциплин, %
10	П: Экономика промышленности; Бухгалтерский учет; Финансовый менеджмент О: Высшая математика; Иностранный язык; Статистика; Организация механизированной обработки информации	7	20.5
9	П: Техничко-экономическое планирование	1	2.9
8	П: Основы предпринимательства О: Физкультура	2	5.9
7	П: Математические методы в экономике; Теория организации производства; Маркетинг О: Теория вероятностей; Имитационное моделирование	5	14.7
6	О: Физика; Инженерная графика; Технология конструкционных материалов	3	8.8
1 - 5	П: Политэкономия; История экономических учений; Финансы и кредит; Внешнеэкономическая деятельность О: Техническое обеспечение АСУП; Математическое обеспечение АСУП; Информационное обеспечение АСУП; Проектирование АСУП; Программирование; Политология; Системный анализ; Организация управления ГПС; Философия; Гражданская оборона Охрана труда; Право	16	47.1

В группу 5 вошли выпускники пилотной магистерской программы, которая реализовалась в университете в начале 1990-х годов, но после

первого выпуска прекратила свое существование на несколько лет. Наряду с профессиональными экономическими дисциплинами студенты изучали большой объем дисциплин, содержание которых связано с автоматизацией и программно-информационной сферой. Большая часть этих дисциплин оказалась малополезной в профессиональной деятельности, что можно объяснить сочетанием социально-экономических преобразований с быстрым научно-техническим прогрессом, обусловившим устаревание знаний. В целом доля малополезных дисциплин составила 47.1%.

В таблице 7 приводятся обобщенные итоги количественного анализа результатов обследования.

Долю дисциплин, которые, которые оказались полезными выпускникам, можно рассматривать как показатель эффективности учебных планов с точки зрения формирования бизнес-компетенций.

*Таблица 7. Обобщенные результаты обследования*

*Table 7 Generalized results of examination*

Балл	Группа 1		Группа 2		Группа 3		Группа 4		Группа 5	
	Число дисциплин	Доля, %								
10	15	35.7	15	30.6	0	0.0	0	0.0	7	20.5
9	2	4.8	3	6.1	0	0.0	8	16.7	1	2.9
8	6	14.3	12	24.5	7	35.0	16	33.3	2	5.9
7	2	4.8	2	4.1	2	10.0	11	22.9	5	14.7
6	3	7.1	5	10.2	3	15.0	8	16.7	3	8.8
от 1 до 5	14	33.3	12	24.5	8	40.0	5	10.4	16	47.1
Всего:	42	100.0	49	100.0	20	100.0	48	100.0	34	100.0

Таблица 7 показывает более низкую эффективность планов магистратуры по сравнению с планами бакалавриата.

### **Выводы** *Conclusions*

Успешность интеграции выпускников университета в профессиональную среду связана с наличием у них бизнес-компетенций. Анализ

подтвердил, что задача оценки и повышения эффективности программ обучения с точки зрения формирования бизнес-компетенций является очень актуальной. По нашему мнению, ее решение за счет исключения их учебных планов общеобразовательных дисциплин, значительная часть которых оценена выпускниками как малополезные в практической деятельности, не соответствует генеральным целям образовательной деятельности в современном обществе. Следовательно, блок этих дисциплин должен быть проанализирован с позиций: 1) способствования дисциплин осознанию связей между сферой профессиональной деятельности выпускников и социальной сферой и природно-экологической средой; 2) способствования дисциплин овладению универсальными методами познания, что прежде всего относится к изучению математики.

Блок профессиональных дисциплин должен анализироваться с позиций: 1) роли дисциплины в формировании структурного видения профессиональной сферы и ее внутренних взаимосвязей; 2) избегания включения в учебные планы дисциплин, содержание которых ориентировано на узкие специфические аспекты профессиональной деятельности и/или сводится к формированию навыков использования узкоспециализированных приемов работы и/или аппаратно-программных средств; 3) способствования дисциплины опережающему формированию бизнес компетенций, то есть бизнес-компетенций завтрашнего дня.

Проведенное исследование развивает аналитический и оценочный аппарат компетентностного подхода, что в перспективе должно способствовать формированию эффективной модели экономического образования в российских университетах.

### **Summary**

Successful integration of university graduates into the professional environment is related with their business competences. To evaluate the business-competences of the university graduates, the self-examination results of the St. Petersburg Polytechnic University graduates, who received diploma in economics and have different work experience, were used.

The analysis confirmed that evaluation and improvement activeness of the curricula from the standpoint of forming business competences is very urgent. In our opinion, despite of the fact that significant part of general education disciplines was rated by graduates as of little use in professional activities, the exclusion of these disciplines from the curricula does not correspond to the general goals of education in modern society.

Therefore, the list of these disciplines should be analyzed from the perspective of: 1) promoting awareness of the relations between the field of graduates' professional activity and the social sphere as well as the natural environment; 2) the promotion of mastering universal methods of cognition, which primarily relates to the study of mathematics.

The block of professional disciplines should be analyzed from the positions of: 1) the role in the forming structural vision of the professional field and its internal relationship;

2) avoidance of inclusion in the curricula the disciplines, which content is focused on narrow specific aspects of professional activity and/or is reduced to the formation skills in the use of highly specialized working methods and/or hardware and software; 3) promoting discipline in the advance formation of business competences, that is, tomorrow's business competences.

The study develops the analytical and evaluative apparatus of the competency-based approach, which in the future should contribute to the development an effective model of economic education in Russian universities.

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# КОНТЕКСТУАЛИЗАЦИЯ ЗНАНИЙ КАК ОСНОВА НОВОЙ МОДЕЛИ ПОДГОТОВКИ УЧИТЕЛЯ СРЕДНЕЙ ШКОЛЫ

## *Contextualising Knowledge as the Basis of New Model School Teacher Preparation*

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**Abstract.** *Processes of convergence and integration that characterize contemporary society naturally seep into the education system, first of all at school. Proof of this are the modern State educational standards for general education in Russia, which focuses on the formation, along with subject, metasubject educational results. However, the preparation of teachers is based on subject principle, which hampers the realization of interdisciplinary integration laid down in standards. Increase massif operated knowledge from different disciplinary areas requires new approaches to formation of teachers' professional skills, primarily, the ability to constantly replenish and build their personal knowledge. Currently, the development of creative abilities of presentation and interpretation training information that is interdisciplinary in nature. An interdisciplinary approach in teaching alters the level and quality of learning. The basis for this approach in the preparation of teachers can become idea of knowledge contextualization. The aim of this paper is theoretical and experimental justification of the need to build a new model of teacher preparation, capable to participate in solving the problems of the integration of school subjects. Methods of theoretical analysis (system, historical and problematic), as well as methods of design and experimental work are used. The article presents the results of experimental work undertaken to search for a new model of teacher preparation, capable to participate in the integration of school subjects (for example mathematics and Russian language), concepts, laid down in model building, revealed the prior directions of its implementation.*

**Keywords:** *contextualising knowledge, interdisciplinary courses, teacher training model*

### **Введение** **Introduction**

Проблема подготовки учителя-предметника становится в настоящее время стратегическим объектом исследования (Fullan, 2006). Как ни

парадоксально, но до сих пор многолетние поиски новой модели подготовки учителя средней школы осложняются теми процессами, которые принято называть когнитивными. Несмотря на достигнутые результаты в исследовании особенностей познавательной деятельности в современных условиях, когнитологи, физиологи, психологи вынуждены признать неэффективность современных предметных методик обучения в формировании понимания и применения знаний учащимися. Об этом свидетельствуют и результаты российских школьников в международном исследовании PISA (Program for International Students Assessment, PISA).

Российское образование переживает трудный этап пересмотра устоявшихся принципов формирования содержания образования. Если обратиться к анализу содержания языкового или математического образования, то следует признать, что мы изначально заложили невыполнимую, но самое главное – неостребованную задачу. Мы по-прежнему стоим на позиции увеличения объема удерживаемых в памяти сведений и массива оперируемых знаний. Реалии современной жизни таковы, что обучающийся начинает понимать, что не надо «стремиться всё знать», надо знать, как можно узнать нужное, то есть знать, как учиться. А кроме того, очень важно быть способным обращать имеющиеся теоретические и практические знания, полученные в виде «готовых знаний», в стратегии решения новых задач, в выбор методов получения нового знания. Обучающийся должен уметь «связывать знания», полученные из разных областей, и «придавать им смысл», то есть уметь их контекстуализировать (Verbickij, 2017). И этому всему должен научить своих учеников учитель, который сам воспитывался (да и сейчас воспитывается) в системе, ориентированной на усвоение узкопредметных знаний.

Цель проведенного исследования состоит в поиске возможных способов контекстуализации содержания профессионального образования учителя на примере подготовки учителей математики и русского языка по программам магистратуры.

Для достижения цели используются методы анализа научно-методической литературы, практики, собственного многолетнего опыта и результатов процесса подготовки учителей математики, русского языка и литературы, прежде всего в Российском государственном педагогическом университете имени А.И. Герцена (далее - РГПУ), а также наблюдения процесса обучения учащихся соответствующим предметам в общеобразовательной школе.

## Обзор литературы *Literature Review*

Подготовка учителя в современных условиях требует новых подходов, нацеленных на формирование принципиально новых профессиональных компетенций. Разработка и внедрение современных моделей подготовки учителя невозможно без учета результатов, полученных в ходе исследований ученых разных областей знаний. «Существующая педагогика, заблудившаяся в дебрях изучения себя самой, опираясь на свои «собственно-педагогические законы», игнорирует то, что давно известно в психологии, физиологии, анатомии» (Kushnir, 2001, p.51).

Среди таких подходов можно выделить *синергетический* подход, в рамках которого система образования рассматривается как самоорганизующаяся система, а педагогическая деятельность как имеющая синергетическую сущность (Budanov, 1999; Knjazeva & Kurdjumov, 1997). Другим подходом является *целостный подход к обучению* на основе интеграции различных форм познавательной деятельности (Sirotjuk, 2005).

Наиболее востребованной является задача подготовки учителя, готового работать в условиях «объективной реальности образовательных изменений» (Fullan, 2006). Необходимость *контекстуализации знаний*, направленной на понимание контекста и успешное преобразование учебно-познавательной деятельности в социально-практическую признается как важнейший смыслообразующий элемент профессиональной деятельности учителя (Verbickij, 2017; Moran, 1999).

Обращение к поиску новых моделей подготовки учителей обусловило и анализ литературы, посвященной различным концепциям развития дидактики. В частности, к анализу *концепции инфокогнитивной дидактики*, «задачей которой является разработка образовательных технологий, содержащих такие методы и формы обучения, которые позволили бы обучаемому усваивать принципиально большие, нежели ранее, объемы учебной информации» (Karpenko, p. 134).

Построение новой модели подготовки учителя требует пересмотра как содержания, так и общих ориентиров организации учебно-познавательной деятельности. К такому выводу можно прийти на основе результатов исследований физиологов, когнитологов, психологов и педагогов. Относительно содержания подготовки речь должна идти о его построении на *основе интегративных знаний* в области познавательной деятельности, наиболее соответствующих особенностям деятельности мозга при осуществлении процесса познания (Karpenko, 2009). Что касается организации учебно-познавательной деятельности в процессе профессиональной подготовки, то для ее осуществления необходимо

создавать особые психолого-педагогические условия, направленные на развитие *сложного нелинейного мышления* (Davidenko, 2016).

Проблема контекстуализации образования была предметом специального рассмотрения в исследованиях А.А. Вербицкого (Verbickij, 2017). При этом упор делается прежде всего на использование профессионального контекста как важнейшего смыслообразующего элемента профессиональной деятельности, а также инструмента формирования профессиональных компетенций современного учителя.

### **Теоретические основы исследования** *Theoretical Basis*

В ходе десятилетнего опытно-экспериментального исследования мы актуализировали теоретические проблемы, которые определяли задачи практической работы. Известно, что в истории педагогической мысли красной нитью проходит идея о главной цели любого обучения. «Правильно обучать ... это значит – раскрывать способность **понимать** (выделено нами) вещи» (Komenskij, 1992, р. 335). И для того, чтобы раскрыть эту способность, были изобретены различные педагогические средства, методы и принципы обучения. Среди них можно выделить такие, которые предполагали включение приобретаемых знаний в практическую или профессиональную деятельность обучающихся, другими словами, в определенный значимый для школьников контекст. К ним можно отнести, например, использование метода проектов, реализацию принципа политехнизма в школьном образовании или производственное обучение как составную часть школьного образования (Dzhurinskij, 2013).

В современной науке ярко проявляется процесс, который называется *конвергенцией*. Этот процесс отражает интеграционную тенденцию во всех сферах деятельности современного общества. Если раньше он наблюдался для «близких» научных областей, например, естественнонаучных (физики и химии, физики и биологии, химии и биологии), то сегодня он характерен и для таких, казалось бы, «далеких» областей, как математика и лингвистика (Partee, Meulen, & Wall, 1990). По мнению известного русского математика В.А. Успенского, пока трудно разрушить существующий между разными науками барьер (например, такими как математика и лингвистика), но при этом «особенно благородная цель – уничтожить этот барьер внутри отдельно взятой личности, то есть превратить гуманитария отчасти в математика, а математика – отчасти в гуманитария» (Uspenskij, 2011, р.4-5). Эта цель должна стать важнейшей для учителя, занимающегося образованием человека, которому предстоит жить и созидать новый интегрированный мир.

Междисциплинарные исследования на рубеже веков направлены на системные представления всех аспектов познавательной деятельности (см., например, исследование Karpenko, 2009). Несомненно, интеграция разных наук, направленных на исследование особенностей познавательной деятельности человека в современных условиях, потребует и разработки *новой дидактики*.

Наиболее перспективным, на наш взгляд, является целостный подход к обучению на основе интеграции различных форм познавательной деятельности (*холистическое обучение*). «Холистическое обучение включает в себя эмоции, чувства, собственное мнение учащихся об отдельных элементах естественнонаучного знания и, конечно, научные факты и концепции. Это сбалансированная модель, обращенная к ученику, как к целостной личности» (Sirotnik, 2005, p.20).

В настоящее время актуализировались проблемы формирования у будущих учителей так называемого *нелинейного мышления*, которое позволяет целостно воспринимать мир, принимать решения в неоднозначных ситуациях. Именно в этом ракурсе рассматривается и такая дидактическая задача, как *контекстуализация знаний*.

Особое внимание следует обратить на оригинальную концепцию контекстного обучения будущих учителей, основанную на понимании контекста (Verbickij, 2017). При этом рассматриваются предметные и социальные контексты. В качестве основного инструмента такого обучения выделяются учебные тексты, модели проблемных ситуаций и сами проблемные ситуации.

Вопросы контекстуализации обучения изучаются достаточно активно как в России, так и в других странах либо применительно к профессиональному образованию учителя, либо к обучению в общеобразовательной школе.

Необходимость контекстуализации знаний обусловлена более глубинными процессами, связанными с изменениями в когнитивной сфере современного человека. Э. Моран (Moran, 1999) отстаивает идею о необходимости внедрения в процесс обучения принципов *сложного нелинейного мышления*. Речь идет о таком типе мышления, который ориентирован на целостное восприятие мира и человека. «Познание мира как мира целостного становится одновременно интеллектуальной и жизненной необходимостью...» (Moran, 1999, p.3). Формирование на разных этапах обучения нелинейного мышления направлено на развитие умения принимать решения в условиях неоднозначного и многовариантного образовательного процесса (Davidenko, 2016). Декларативно данная идея принимается большинством специалистов в области образования, но до сих пор нет единого четкого понимания сущности нелинейного мышления.

Неутихающие споры по поводу выбора модели обучения, нацеленной на формирование «хорошо обученной головы» (по выражению Морана, 1999), свидетельствует, что до сих пор нет ответа на вопрос: готова ли методическая наука к новым реалиям, свидетельствующим о свершившемся «когнитивном перевороте»?

Исследования зарубежных и отечественных ученых убеждают в необходимости «реформы профессии педагога» (Fullan, 2006). «Преподавание должно стать очень интеллектуальной, а также очень деликатной профессией. Поскольку оно существует на фоне интенсивных социальных и политических обстоятельств, оно является профессией, которая требует весьма сильного эмоционального ума» (Fullan, 2006, p. 130).

Подготовка учителя является главной стратегической задачей, от решения которой зависит успешное реформирование образовательной системы. Сегодня становится очевидным, что методики подготовки учителя-предметника нуждаются в пересмотре. Главной задачей на современном этапе является обучение будущего учителя новым методам и технологиям для успешной реализации профессиональных задач. Одной из самых сложных задач является создание условий для формирования умений представления учебной информации в контексте естественного языка.

Развитие диалогического нелинейного мышления потребует совместной работы специалистов разных областей знаний (физиологов, социологов, психологов, когнитологов и др.). Научить мыслить по-новому - значит научить мыслить нелинейно, мыслить в альтернативах, предполагая возможность и получения неожиданного результата.

Для формирования сложного нелинейного мышления необходимо создание *психолого-педагогических условий*, при которых становятся возможными процессы порождения знаний самим обучающимся, его активная и продуктивная деятельность.

Следует признать, что решать эти вопросы силами специалистов только в области образования представляется непродуктивным, потому что изменение парадигмы образования как науки обуславливает не только переосмысление представлений о системе знаний, составляющих фундаментальную основу образования, но и поиски новых подходов в *обучении на межпредметной (междисциплинарной) основе*.

Современный школьник не может усвоить без качественного ущерба то количество учебной информации, которое заложено в образовательные программы. Математик, историк, филолог должны «сесть за стол переговоров» для того, чтобы сформировать общую программу для овладения «языком знаний». Междисциплинарный подход в обучении меняет уровень и качество освоения знаний. Первым шагом является укрупнение учебных дисциплин не за счет механического увеличений

часов, а счет включения в дисциплину различных курсов, ориентированных на формирование интегративных знаний.

### **Методология** *Methodology*

Основными методами исследования являются методы теоретического анализа (системного, исторического и проблемного). Они используются для показа возникновения и развития идеи контекстуализации содержания образования как в общеобразовательной, так и профессиональной (педагогической) российской школе, для выявления спектра проблем, которые обнаруживаются при реализации этой идеи на современном этапе и необходимости их решения с использованием результатов, полученных в различных областях науки.

В ходе исследования проводился и анализ нормативных документов, таких как Федеральные государственные образовательные стандарты как общего, так и высшего педагогического образования, действующие сегодня в Российской Федерации.

Особое внимание было обращено на анализ практики реализации контекстного подхода в школе и педагогическом вузе, которая по утверждению И.П. Костенко в основном и доказывает законы педагогики (в частности, методики обучения) (Kostenko, 2013). Практическая часть исследования проводилась, начиная с 2009 года, в школах Санкт-Петербурга и Ленинградской области, а также в РГПУ. В качестве оснований для проведения анализа использовался собственный многолетний опыт подготовки учителей в РГПУ, а также метод наблюдения процесса обучения учащихся как опытными учителями, так и студентами-практикантами.

В ходе наблюдения более чем 70 уроков учителей математики и около 110 уроков студентов-практикантов мы фиксировали установление как внешних связей различных предметов (например, использование фавулы задачи или ситуации из другого предмета для формулирования задания), так и внутренних содержательных, значимых связей с другими предметами или повседневной практикой.

Наблюдение уроков подкреплялось проведением индивидуальных бесед с практикующими или будущими учителями (студентами-практикантами), в которых выявлялись причины трудностей при конструировании содержания уроков с показом прикладных возможностей своего предмета, а также при их проведении. С такой же целью проводились индивидуальные собеседования с учителями математики, нескольких школ Санкт-Петербурга, которые участвовали в проектной деятельности по

созданию межпредметных модулей в рамках осуществления сетевого проекта «Современные технологии образовательной деятельности».

Параллельно с наблюдением нами проводилось интервьюирование администрации школ, руководителей методических объединений учителей математики и русской словесности, анализ публикаций в средствах массовой информации по проблемам образования. Целью этой работы было выявление объективных трудностей, которые испытывают современные учащиеся при овладении содержанием таких базовых для российской школы предметов как русский язык и математика. При этом особое внимание было уделено мнению родителей учащихся на этот счет.

Еще одним методом исследования стал метод проектирования межпредметного содержания как нового контекста обучения. Этот метод стал рассматриваться как метод педагогических исследований с конца 90-х годов прошлого века (Radionov, 1996). Суть его состоит в трансформации образовательных систем и их составляющих, например, образовательных программ, и оценки результатов такой трансформации. Этот метод мы использовали при создании элективного курса «Мысль, ограниченная словом: математический язык через призму естественного языка» (Stefanova & Shubina, 2011a; Stefanova & Shubina, 2011b).

Опытно-экспериментальная работа по реализации этого курса осуществлялась в 14 образовательных учреждениях Санкт-Петербурга и Ленинградской области. В проведении элективного курса участвовали магистранты, обучающиеся по программам педагогической подготовки, а также учителя школ.

## **Результаты** *Results*

Проведенное исследование показало, что проблема контекстуализации знаний (без использования термина «контекстуализация») уходит своими корнями во времена зарождения научной педагогики, которая рассматривалась как одно из важнейших направлений улучшения понимания учениками изучаемого материала и актуализировалась в разные периоды и в разных странах. В российском образовании указанная проблема была в центре внимания в периоды его реформирования (например, в 20-30-е, 70-е годы прошлого века) и представлялась в виде необходимости изучения учебного материала в определенном контексте (метод проектов) либо включения изученного материала в повседневный или производственный контекст (политехнизация обучения). В подготовке учителя ситуативный контекст рассматривался как важнейшее условие овладения профессиональной деятельностью (например, в ходе различных

производственных практик). Однако в современном обществе эта идея приобретает новые ракурсы, учитывающие изменения в социокультурной сфере и познавательной деятельности, а также в науке и повседневной практике.

Включение знаний в новые контексты рассматривается как обязательный элемент процесса обучения, обеспечивающий формирование мотивации обучающихся, а также качественное усвоение знаний. Это требование закреплено в Федеральных государственных образовательных стандартах как общего, так и высшего профессионального образования в России. Оно вытекает из результатов фундаментальных исследований в области физиологии, психологии, когнитологии, социологов, в которых убедительно показано, что в современном обществе человек для эффективной жизнедеятельности должен обладать интегративными знаниями и сложным нелинейным мышлением. Все это закладывается в школе.

Результаты наблюдений за деятельностью учителей математики на уроках в общеобразовательной школе показывают, что в 65% случаев (на 70-ти уроках) после введения понятий или утверждений была осуществлена контекстуализация знаний посредством приведения примеров их применения как в области математики, так и в других предметных областях. При этом только в 20% из них (т.е. в 13% от общего числа наблюдаемых уроков) примеры были приведены из других предметных областей или жизненных ситуаций, что обычно способствует формированию ассоциативных связей и улучшению понимания учебного материала. Для студентов-практикантов эти показатели равны 52% и 12% (6%), соответственно. Такую ситуацию нельзя назвать удовлетворительной.

В качестве одной из важнейших причин такого положения студенты-практиканты и учителя называли отсутствие у них умений использования предметных знаний в нестандартных, прежде всего, межпредметных ситуациях, а также большие затраты времени на конструирование соответствующего учебного материала. Эти же причины были выявлены в процессе работы опытных учителей над межпредметными модулями, которые они разрабатывали в рамках проекта «Современные технологии образовательной деятельности». При этом практически все говорили о том, что использование ярких примеров из других областей знаний, описание ситуаций математические знания, значительно улучшает понимание учебного материала даже слабыми учащимися, а также улучшает прочность знаний.

Полученные результаты привели нас к мысли о необходимости профессиональной разработки учебных материалов, а точнее содержания элективного курса, в котором была бы реализована идея контекстуализации

знаний на межпредметной основе. Речь идет об элективном курсе «Мысль, ограниченная словом: математический язык через призму естественного языка» (Stefanova & Shubina, 2011a).

В процессе проектирования элективного курса была разработана его концепция. В качестве одного из положений концепции курса выделен общий подход к рассмотрению математического языка – последовательное рассмотрение знаковой и терминологической системы, а также семантики математических текстов через сравнение с аналогичными структурными компонентами естественного языка. Другими словами, в концепции отражается классическое понимание контекстуализации как включения выражений естественного языка в речевые ситуации математического языка и наоборот. Еще одно положение концепции курса исходит из признания особой роль языка, прежде всего, вербального, как средства выражения мыслительной деятельности при освоении математических знаний. С другой стороны, установленные учеными (и подтвержденные педагогами и родителями) психомоторные реакции современного человека на слово как знак, на восприятие текста как гипертекстового образования привели нас к необходимости формирования содержания и структуры элективного курса как модели *нового текста* - креолизованного (поликодового) текста, интегрирующего в себе как вербальные, так и невербальные средства. По мнению ученых, в настоящее время становится актуальным создание «интегрированной модели понимания текста и изображения, которая сможет, по крайней мере частично, ответить на вопрос: когда изображение и письменный текст, представленные вместе, могут способствовать лучшему пониманию информации, чем если бы они были представлены отдельно» (Vzgljad kota Shredingera..., 2018, p.132). В нашем исследовании была предпринята успешная попытка подтверждения данного положения. Наконец, третье положение концепции относилось к организации способа освоения элективного курса, ориентированной на развитие нелинейного мышления. Своеобразная форма подачи материала, похожая на гипертекст, предоставляет возможность множественного выбора собственного пути освоения содержания на основе ассоциативных связей и в соответствии с индивидуальными способностями обучающегося.

Следующим шагом в проектировании элективного курса было создание учебных текстов и системы заданий учебного пособия (Stefanova & Shubina, 2011a), а также методических рекомендаций учителям по реализации курса (Stefanova & Shubina, 2011b) для осуществления опытно-экспериментальной работы.

Качественный анализ результатов опытной работа по реализации элективного курса показал, что учащиеся быстро включаются в деятельность, успешно находят и используют имеющуюся у них

информацию для выполнения межпредметных заданий, чувствуют себя достаточно комфортно и уверенно, испытывают удовлетворение от самого процесса познания. С другой стороны, учителям реализация элективного курса дается значительно сложнее. Они говорят о необходимости профессиональной помощи в разработке межпредметного содержания, которое можно использовать в практической работе (на уроках или в рамках дополнительного образования), а также специальной подготовки учителя, как в процессе обучения его в вузе, так и в системе повышения квалификации.

### **Выводы** *Conclusion*

На основе обобщения полученных результатов мы пришли к выводу о необходимости создания новой методики межпредметной образования, которая сочетает традиционную методику предметного обучения с методикой контекстуализации знаний. Имеющийся, пока очень небольшой, опыт создания соответствующего межпредметного содержания и нетрадиционной методики его использования в образовательном процессе показывает, что включение приобретенных ранее предметных знаний и формирование новых знаний в такой ситуации не только способствует повышению уровня их понимания учащимися, но и придает этим знаниям ясные для них смысл и значение. Это способствует изменению отношения учащихся в целом к процессу обучения.

С другой стороны, нами установлено, что учителя, воспитанные в предметной идеологии и довольно неплохо владеющие предметными методиками, неспособны самостоятельно эффективно реализовывать методику, построенную на межпредметном содержании. Они испытывают существенные затруднения как в создании новых форматов учебных материалов, так и в реализации новых подходов к организации учебно-познавательной деятельности учащихся на их основе. Об этом свидетельствуют не только результаты нашего исследования, но и результаты различных международных исследований. Источниками этих затруднений являются мировоззренческие и профессиональные установки, которые формируются у будущих учителей в процессе профессиональной подготовки в вузе, отсутствие опыта предметно-содержательного (а не педагогического) общения и взаимодействия с коллегами, преподающими другие предметы, а также недостаток фундаментальных знаний в других предметных областях.

Выходом из этой ситуации может стать включение в программу профессиональной подготовки учителя компонента, обеспечивающего

овладение им межпредметной методикой, что является отражением идеи контекстуализации знаний. Мы убеждены в том, что это нужно делать на этапе подготовки учителя в вузе, а не в системе повышения квалификации, так как здесь речь идет, прежде всего, о формировании нового профессионального мировоззрения и поведения, которые после окончания вуза формировать уже поздно.

Уже сегодня эту идею можно реализовать в магистерских программах, разработанных на основе модульного принципа. Эффективными могут стать образовательные модули, направленные на формирование интегрированных предметных знаний. Кроме того будущему учителю в рамках этих модулей целесообразно предложить курсы, отражающие современные достижения когнитологии, инфокогнитивной дидактики, методики холистического обучения. Не менее важным становится здесь и подготовка учителя к созданию нового учебного текста, который ориентирован не столько на «готовое знание», сколько на формирование способности получать знания.

### **Summary**

The teacher was and remains the defining figure in the general (school) education system. However, the highly professional teachers' training in Russia (where teachers in one subject field are usually prepared) does not fully meet neither the needs of modern society, reflected, in particular, in the requirements of state standards, nor the cognitive needs of students, consisting first of all, in achieving the understanding of the knowledge importance. This problem may be solved by incorporating subject knowledge into different contexts, including inter-subject (interdisciplinary) ones.

The results of systemic, historical and problematic theoretical analysis, as well as experimental work, show this convincingly. However, teachers, including teachers of mathematics and Russian language and literature, brought up in a narrow-professional subject ideology, have significant difficulties in using the inter-subject context. This follows the need to build a new model of teacher training based on the idea of contextualizing knowledge, particularly through inter-subject content. An experimental work with inservice mathematics teachers and Russian language and literature teachers was carried out in the following directions: 1) the use of inter-subject connections in lessons, 2) the creation of inter-subject training modules, 3) the implementation of inter-subject elective course, based on the integration of mathematical and philological knowledge. Teachers were found to have the greatest difficulty in selecting inter-subject content, choosing new forms of student learning and meaningful interaction with teachers of the other subject. The same problems exist but on a larger scale for student practitioners (preservice teachers). The results convincingly demonstrate the need for appropriate training of the preservice teacher still in the university. The most appropriate training should be carried out at the master's level, including special modules in the educational program, which reveal snare new educational ideology and methods of contextual learning, built, for example, on inter-subject content.

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# FORMATION OF FUTURE KINDERGARTEN TEACHERS' ETHNOCULTURAL COMPETENCE IN NON-FORMAL ARTISTIC AND CREATIVE GROUPS

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**Abstract.** *The purpose of the paper is to identify the role and place of non-formal artistic and creative groups in the process of formation of future kindergarten teachers' ethnocultural competence. Ethnocultural competence is considered by authors as an essential component of future kindergarten teachers' vocational training in condition of modern challenges, which Ukrainian society faces nowadays. The complex of theoretical and empirical research methods (literature analysis, interview, experiment, etc.) was used. The obtained results show positive dynamics of formation of future kindergarten teachers' ethnocultural competence after receiving non-formal education in artistic and creative groups at higher educational institution.*

**Keywords:** *artistic and creative groups, ethnical self-consciousness, ethnocultural competence, mentality, non-formal education.*

## Introduction

Nowadays, Ukraine is in a crucial time when it is important to protect the country's independence and sovereignty. It is efficient in this case to preserve and enhance the ethnocultural heritage of Ukrainians and to create conditions for its transmission to the young generation. A future kindergarten teacher has one of the leading positions in this process, developing the ethnic identity of a person, allowing him to receive knowledge and ideas about the culture, traditions, ideals, values of his people. This can be done based on the formation of the graduate's ethnocultural competence in higher education institutions.

Ukrainian scientists I. Beh (2003), P. Kononenko (2001), J. Rudenko (2001), N. Sulayeva (2017; 2018), P. Shherban', (2001), O. Visnevs'kij (2010) have developed and have approve ways and means of education of the young generation on the best spiritual and material models of Ukrainians. The scientists

emphasize the importance of national education, which should be carried out continuously in different institutions such as families, preschool, general, extracurricular, vocational schools, children's and youth organizations and associations, territorial community. O. Dokukina (2008) has noted that national education should ensure a harmonious development of a personality, contribute to the flowering of his abilities and talents, and enrich the intellectual potential of the people, their spirituality and culture.

Introduction of ethnocultural component in the pedagogical process of educational institutions is analyzed by modern Ukrainian scientists A. Bohush and N. Lysenko (Bohush & Lysenko, 2002). Specificity of formation of future kindergarten teachers' ethnocultural competence of students is considered by L. Kalashnyk, O. Novikov, K. Yur'yeva (Kalashnyk, Novikov, & Yur'yeva, 2017). M. Olijnyk has analyzed the problem of ethnocultural self-consciousness of preschool children (Olijnyk, 2010). With all the undeniable importance of the theoretical and practical achievements of scholars on the future kindergarten teacher's training for national, ethnic education, it should be noted that sufficient material has not yet been accumulated to solve the problem of developing the ethnocultural competence of students of pedagogical universities in non-formal artistic and creative groups.

The purpose of our article is to determine the role and place of non-formal artistic and creative groups in the process of forming of future kindergarten teacher's ethnocultural competence.

To actualize the identified problem and to determine the effectiveness of enrichment of formal education (provided in higher educational institutions) with non-formal art one we used various methods: theoretical (content analysis of literature, terminological and comparative analysis to track the views of scientists and practitioners on the problem under study); empirical (diagnostic - conversations, narrative interviews; observational (observation of artistic and educational activities of participants of artistic and creative groups during the experiment); pedagogical experiment.

### **Literature review**

Using the term "ethnocultural competence of personality", we rely on the definition of domestic scientists O. Dokukina H. Lozko, O. Nel'ha, who considers it as the ability of a person to navigate freely in the world of the values of their ethnicity culture, to freely understand the language ("codes", "keys") of this ethnic culture and freely create in this language (Nel'ha, 1997, p. 289).

These researchers point out that the formation of the ethnocultural competence of the individual should begin in the family. It is believed that the vast majority of children relate themselves to the people to which his parents

belong. Thus, O. Nel"ha states that if the members of the Ukrainian family can be recognized "because of their unique mentality" (Nel"ha, 1997, p. 136), ethnic morality, ethnic self-consciousness, and ethnic ideology, then naturally, the child brought up in that kind of family will consider himself Ukrainian.

We believe that it is essential for the development of the child's ethnical culture to gain an education in a preschool educational institution, where the defining factors are the skills, wisdom, views, beliefs, ideals, a spirituality of the kindergarten teacher, as well as his formed ethnocultural competence. Its development is a result of education in higher educational institutions

M. Yevtux states that the content-related component of future kindergarten teacher training in higher pedagogical educational institutions includes:

- future kindergarten teacher's professionally significant qualities and features of character;
- intelligence for the development of acumen, the professional orientation of perception, memory, thinking, imagination and enhancement of children's creative abilities;
- moral qualities, which include love for children, faith in their abilities and potential, pedagogical justice, respect for children and are the basis of professional ethics;
- spirituality, that is, the desire for truth in knowledge and work, beauty, which is the basis of the modern kindergarten teacher's general and pedagogical culture of the (Yevtux, 2008).

Subsequently, one of the influential factors in enriching the content of the future kindergarten teacher's vocational training with the national component and the formation of his ethnocultural competence is the creation of a socio-cultural environment with distinct national characteristics in a higher educational institution

This environment allows integrating the formal component of education (future kindergarten teacher's theoretical and practical training) and the non-formal one (associations, groups, artistic and creative ones, in particular). The convergence of these educational activities makes the process of future kindergarten teacher's ethnocultural competence formation more effective. In Poltava V.G. Korolenko National Pedagogical University, students have an opportunity to strengthen their education with a non-formal component while studying various subjects such as "History of Ukraine", "Culture of Ukraine", "The Ukrainian Language", "Preschool Ethno Pedagogy and Methods of Acquaintance Children with Folk Studies", "Preschool Linguodidactics", etc. A non-formal component is represented by permanent artistic and creative groups, as well as, temporary ones created for participation in contests, competitions, presentations, projects, cultural-artistic events, etc. Taking part in

these groups, future kindergarten teachers have an opportunity to obtain a non-formal art education. It is defined by N. Sulayeva as a person's voluntary artistic activity, which is carried out outside formal education in higher education institutions, and is mostly implemented in artistic and creative groups, and is not accompanied by the issuance of a state diploma (Sulayeva, 2018).

The individual-personal basis of the activities of non-formal artistic and creative groups' participants satisfies the needs of a particular person, using the potential of his free time. The content of this work is determined by the task to bring up high-spirited people who can protect, enrich and pass on to the future generations the national values of the Ukrainian people. That means to form their ethnocultural competence. This is especially effective if these artistic and creative groups have a national orientation. For example, there are more than 20 permanent non-formal artistic and creative groups of national orientation in Poltava V.G. Korolenko National Pedagogical University. Many of them are known in Ukraine and abroad. The following groups are, for instance, Ukrainian Folk Choir "Kalyna", Folk Amateur P. Lymanskii Choir, Folk Dance Group "Vesna", Folk Ensemble "Zhyva Voda", Men's Ensemble "Chebrets" (Sulayeva, 2017). At the same time, temporary artistic and creative groups are systematically organized at the Faculty of Psychology and Pedagogy of Poltava V.G. Korolenko National Pedagogical University. Students have the opportunity to stage a folk tale, create a puppet theatre, organize a literary event, make a folk toy, etc.

A particular value of future kindergarten teachers' artistic activity in non-formal artistic and creative groups of national orientation is that they create favourable conditions for the development of their mentality, the formation of their ethnic morality, the deepening of ethnic self-consciousness, the enrichment of ethnocultural identity.

H. Lozko has noted that mentality is a national type of worldview ("spirit of the people"), which is based on ethnic images and symbols (often subconscious), which predetermine stereotypes of behaviour, mental reaction, evaluation of certain events or persons, attitude to the surrounding reality (Lozko, 2001, p. 291)

The main feature of the ethnic mentality of the Ukrainian people, according to the scholar O. Nel"ha, is the Ukrainian language, which is a form of the immortality of the ethnic group. Moreover, the concern about the future of the language is "obviously identical to the concern about the future of all Ukrainians, in general (Nel"ha, 1997, p. 136).

Participation in artistic and creative groups allows raising love and respect for the mother tongue. It helps to improve future kindergarten teachers' communicative competence as the basis of their ethnocultural competence. Students without any exceptions are allowed to take part in artistic and creative

groups of national orientation. These can be students who do not speak Ukrainian at home, but Russian, Moldavian, Hungarian, etc. or speakers of ethnic dialects (the Lemko people, the Boyko people, the Hutsul people, etc.). Receiving non-formal art education in artistic and creative groups all students constantly speak literary Ukrainian, in particular, Kyiv-Poltava dialect.

At the same time, other mental traits of the Ukrainian people, which are important for the ethnocultural competence formation, are brought up in artistic and creative groups. O. Nel"ha defines them as the following:

- humanity, which includes peace, gentleness, charity sincerity, spirituality, cordiality, hospitality;
- democracy, which reflects the Cossack tradition of being elected to leadership positions, the equality of women with men in the family;
- peasantry (notable action ethnological trait);
- individualism, which is an invincible will, independence, autonomy, hostility diligence, desire for self-expression, perseverance, orientation, “stubbornness”, optimism, confidence, cheerfulness, lyricism, song-loving) (Nel"ha, 1997, p. 147).

The formation of the above-mentioned features is based on the best samples of Ukrainian art. For example, in the process of performing folk dumas, songs, ballads, historical, lyric, children's songs future kindergarten teachers get acquainted with the best national musical samples. These are «*Dobryj vechir tobi, pane hospodaryu*», «*Oj na hori ta j zhenci zhnut*», «*Kozac"komu rodu nema perevodu*», «*Sydyt" Vasyl" na prypichyku*», «*Kotyku siren"kyj*», etc. Folk songs are full of verbal symbols that overlap with the graphic, vegetable and animal symbols of the Ukrainian people, in particular: a viburnum, a willow, the star, a turtle-dove – a young lady; an oak, a maple, a falcon, the moon – a young man. Symbolic signs sung in songs are only a small part of the wealth of information that Ukrainian folk songs carry.

The future kindergarten teacher, who is a participant of the non-formal artistic vocal folk group, has an opportunity not only to develop his ethnocultural competence but also to deepen the knowledge about events and phenomena of social life, public and family way of living, work of Ukrainians by studying Ukrainian folk songs. There is information about the peculiarities of the struggle against the invaders, national and social oppression of the native people, and, most importantly, examples of the passionate love of the Ukrainian people for the Motherland.

The value of choreographic art in the development of the above-mentioned features is undeniable. For example, performing the folk dances «*Zapletemo rohozu*», «*Hopak*», «*Kruzhalo*», children's ones «*Podolyanochka*», «*Kryvyj tanok*», «*Kody kozaky plachut*», «*Vyjdy, vyjdy, sonechko*» on stage future

kindergarten teachers learn to respect the nature of the native land, reproduce the traditions of Ukrainians. They familiarize themselves with the labor skills of the Ukrainian people and deeply comprehend the specifics of folk beliefs

The formation of future kindergarten teachers' ethnocultural competence also occurs in non-formal theatrical groups, whose work is mainly aimed at developing communicative competence. As a rule, nationally-minded youth opt for works rich in folk songs, games, names of Ukrainian dishes: noodles, kulish, porridge (by I. Kotliarevskyi, I. Netchui-Levitskyi, I. Karpenko-Karyi), musical instruments: bandura, nostril, fipple flute (by I. Kotliarevskyi, T. Shevtchenko), elements of Ukrainian costume: skirt, corset, chain, boots, female headscarf, sheepskin coat (by I. Kotliarevskyi, I. Karpenko-Karyi, M. Starytskyi). It is valuable to form mental traits in the process of performing children's Ukrainian folk tales «Kolosok», «Pan Koc"kyj», «Lysychka sestrychka ta vovchyk-bratyk», «Koza-dereza», «Ivasyk Telesyk».

Performing and staging the fairy tales enables the participants of the national theatre to use the truly sacred sign of human communication – the word. Paying attention not only to the content of the text but also to the phonetic organization of speech – connectivity of sounds, alternation of vowels and consonants, intonation of lexical units, there is an increase in information (exchange of information), interactive (communication and influences of participants) and perceptual (perception by the senses) interrelation.

In the process of practical work in a non-formal theatre group, future kindergarten teachers improve the language skills of their mother tongue, master the experience of generations, knowledge of the surrounding reality to the extent that several times exceeds the experience of their peers. Therefore, it is impossible to overestimate the importance of participation of a student of a higher pedagogical institution in a theatre group.

Improvement of communicative competence and enrichment of vocabulary also occurs in the artistic and creative groups of decorative and applied art (embroidery, puppetry, Easter egg making, straw-works, etc.). Thus, working with items of folk use allows future kindergarten teachers to get acquainted with and learn: • the names of the elements of the Ukrainian costume in the process of making dolls (linen shirt, edge, corset, sheepskin coat, boots-marigolds, cap, capor, wreath, corals, ducats); • the names of the embroidery techniques that have long been common in Ukraine (undercutting, paving, cutting, mesh, carving, plumbing, cross, half-cross, suture stitch, embroidery on mesentery, loose surface, stitching, chain, pigtail, grating); • the terms related to the production of various clay products (potter, potter's wheel, mining, burning, polishing, smoking, snout, mug, plate, rattles, spice, weights, etc.).

At the same time, the formation of ethnocultural competence also occurs in the process of learning the symbolism of the Ukrainian people, which is

extremely important for future kindergarten teachers. In non-formal artistic and creative groups, students have the opportunity to enrich their knowledge of the basic ornamental motives of Ukrainians, which have been developed for many centuries: • graphic symbols (point – beginning of all beginnings; points – stars; a line – the earth; dots between horizontal lines – sown field; a wave between two horizontal lines – land with water reserves; a square, a rhombus – symbols of earth fertility; a circle – the sun, symbol life, etc.); • the symbolic meaning of plants (a viburnum – the blood of the people, virgin beauty and virtue, love, the symbol of their native land; an oak – strength, courage, health; grapes – the joy of family happiness; periwinkle – longevity, enduring youth, declaration of love and family well-being; marigolds – male beauty; berries – welfare, harvest, etc.); • the significance of the images of birds (pigeons, turtles – love, honesty, sincerity, and faithfulness; a crane – the bird of the sun, the herald of fertility of the earth; a duck – a symbol of life, a swallow – goodness, happiness, revival, home comfort, a falcon – the sun, the sky, lightning, courageous young man, The First God, etc.).

A combination of formal education of future kindergarten teachers with non-formal art education in artistic and creative groups makes it possible to revise traditional spiritual values, norms, rules, requirements. It continues the formation of students' ethnic morality. We consider it one of the most important components of the ethnos' spiritual culture. H. Lozko states that it “inspires a person's life with a sense of inner mental radiation ... It, subconsciously instilling ethnic archetypes, ethnic images, and symbols, is a guide to where everyone's soul can immerse themselves in the warmth of the soul of the whole ethnic group” (Lozko, 2001, p. 289).

The providers of non-formal art education are aware of the close connection of ethnic morality with ethnic self-consciousness – a set of knowledge and ideas about the culture, traditions, ideals, values of their ethnicity, as well as the awareness of themselves as a member of the ethnic group, and the place of their ethnicity among other peoples. Therefore, activities in artistic and creative groups are directed to the development of ethnic self-consciousness. It manifests itself in the future kindergarten teachers' ability to identify themselves with the Ukrainian ethnic group and to realize their ethnic “I” as a unique phenomenon. This is due to the future kindergarten teachers' professional activity. In Ukraine, there are occasions when a child is raised in a family, which is uncertain about attachment to one's ethnicity. Sometimes, even “zero” ethnical self-consciousness is formed.

It should be emphasized that artistic activity in artistic and creative groups contributes to the development of another component of self-consciousness – the feeling of the Motherland. Its formation is caused by the action of many factors. In particular, O. Nel"ha distinguishes such factors as the land of ancestors,

country of birth and growth (ethnicization) – “the country of childhood”, place of birth and growth, state of rooted residence, locality of rooted residence, etc.” (Nel"ha, 1997, p. 104).

### **Research results**

Based on the foregoing, the practicability of a convergent combination of future kindergarten teachers' formal education of non-formal art education in artistic and creative groups in Poltava V.G. Korolenko National Pedagogical University requires experimental verification.

Firstly, we determined the proportion of a cultural and artistic component in the system of formal and non-formal education of students of specialty “Preschool education”. An analysis of educational programs and curriculum showed that national cultural and artistic component makes up 27.9% of the total ECTS credits. The proportion of the cultural and artistic component in the non-formal education of future kindergarten teachers in Poltava V.G. Korolenko National Pedagogical University showed almost 65%.

The next stage was the interviewing of 49 third-year students of the specialty “Preschool Education”, which allowed determining the number of students who received and who did not receive non-formal art education in the artistic and creative groups in Poltava V.G. Korolenko National Pedagogical University. Interview results showed that 10.2% (5 students) participated in permanent artistic and creative groups and 73.5% (36 students) – in temporary ones. Thus, interviewing showed that more than a quarter of the students 26.5% (13 students) did not take part in artistic and creative groups and received only formal education in Poltava V.G. Korolenko National Pedagogical University.

An important question for us was to determine whether the combination of formal and non-formal education of future kindergarten teachers influences the formation of their ethnocultural competence or does not affect this process.

In this regard, we created two groups of students of 13 people. The first group consisted of students who did not receive non-formal education in an artistic and creative group, and the Second group – students who received formal and non-formal education. To create the same conditions, we analyzed the results of formal education –academic results of the First group students (students who did not combine formal education with non-formal education). It turned out that out of 13 future kindergarten teachers, 23.1% (3 students) got high academic results – A level, 46.1% (6 students) got good academic results (B level) and 30.8% (4 students) had satisfactory academic results – level C.

Among students who combined formal education with non-formal one, we identified the Second group. It included students who had the same academic

results as the First group (Level A – 3 students, Level B – 6 students, Level C – 4 students).

To diagnose the ethnocultural competence formation of students of the First and Second groups, we defined the criteria and indicators of these criteria.

The definition of the criteria was correlated with the awareness of the concept of ethnocultural competence. Its important component is a free orientation in the world of the values of the culture of one's ethnic group. Accordingly, the first criterion was defined as the criterion of cultural and artistic development. Its indicators were: future kindergarten teachers' motivation to cultural, artistic and educational activities; knowledge of folk artworks; fluent in Ukrainian.

The second criterion according to the components of ethnocultural competence was the criterion of social development. It correlates with the free understanding of non-verbal "codes" "keys" of Ukrainian ethnocultural and fluent use of these non-verbal means. Indicators of this criterion were: the focus on designing strategies for one's life following social norms and rules defined in Ukrainian society; daily behaviour following the traditions and preferences of the Ukrainian people; social national competence of a personality)

Taking into consideration that all components of ethnocultural competence are important components of the spiritual development of the individual, we have chosen another criterion – spiritual development. We chose the following indicators: spiritual potential in the structure of personality; the importance of spiritual national values in the general system of personality values; effectiveness of pedagogical communication in the context of national education.

To determine the criteria for the future kindergarten teachers' development in artistic and creative groups, quantitative characteristics of qualitative indicators were established. The data was acquired to be a means of using diagnostic psychological and pedagogical tools. In particular, a three-point system of complex evaluation of each indicator was used: 3 points – high level, 2 points – sufficient level, 1 point – elementary levels.

To assess ethnocultural competence development according to the criteria of cultural and artistic, and social development students of the First and the Second groups participated in testing, questioning and interviewing were used. These research methods showed that, by the criterion of cultural and artistic development, the results of the First group were significantly outweighed by the high and sufficient levels of the respondents in the Second group (the quantitative and qualitative indicators are presented in Table 1). At the same time, indicators for the criterion of social development outweighed the benefit of the Second Group by a much smaller percentage (Table 1). Assessment of ethnocultural competence development according to the criteria of spiritual

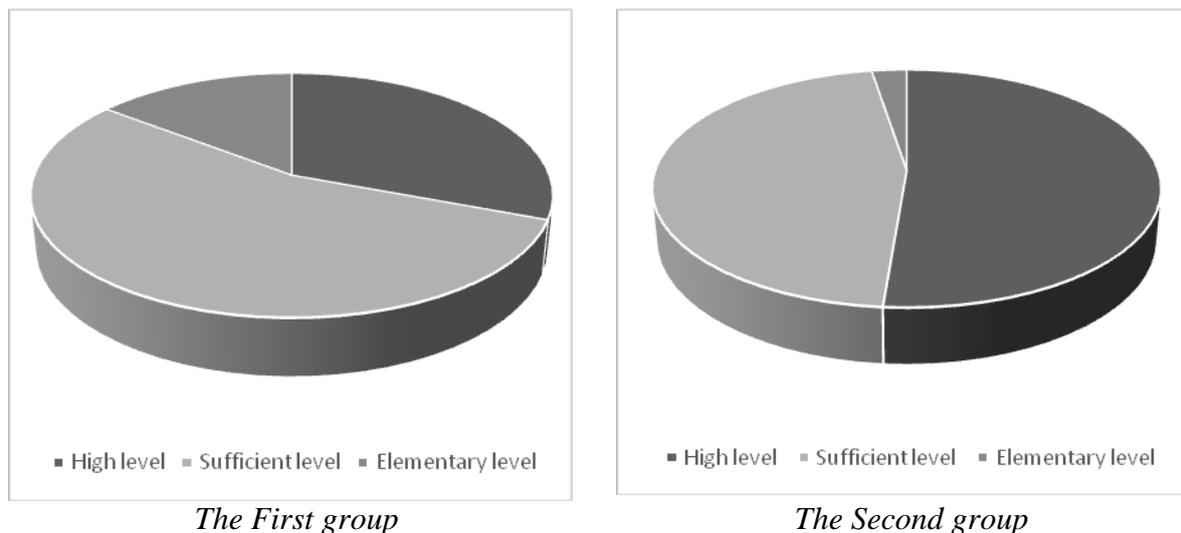
development was performed based on integrative test methods by Ukrainian psychologist E. Pomitkin (spiritual potential of the personality, the method of revealing the formation of spiritual value orientation of the individual) (Pomitkin, 2013) and a modified questionnaire of pedagogical communications effectiveness. The results by the last criterion also showed the merit of development levels in favour of the Second Group (Table 1).

*Table 1 Assessment of the formation of future kindergarten teachers' ethnocultural competence*

Criterion	<b>Cultural and artistic development</b>																	
Indicator	The first indicator						The second indicator						The third indicator					
Level	High		Sufficient		Elem		High		Sufficient		Elem		High		Sufficient		Elem	
Amount	A	%	A	%	A	%	A	%	A	%	A	%	A	%	A	%	A	%
The First group	2	15,4	9	69,2	2	15,4	3	23,1	7	53,8	3	23,1	5	38,5	7	53,8	1	7,7
The Second group	6	46,2	7	53,8	0	0	9	69,2	4	30,8	0	0	6	46,1	6	46,2	1	7,7
Criterion	<b>Social Development</b>																	
Indicator	The first indicator						The second indicator						The third indicator					
Level	High		Sufficient		Elem		High		Sufficient		Elem		High		Sufficient		Elem	
Amount	A	%	A	%	A	%	A	%	A	%	A	%	A	%	A	%	A	%
The First group	4	30,8	8	61,5	1	7,7	4	30,8	7	53,8	2	54,4	5	38,5	7	53,8	1	7,7
The Second group	6	46,1	6	46,2	1	7,7	6	46,1	6	46,2	1	7,7	8	61,5	5	38,5	0	0
Criterion	<b>Spiritual development</b>																	
Indicator	The first indicator						The second indicator						The third indicator					
Level	High		Sufficient		Elem		High		Sufficient		Elem		High		Sufficient		Elem	
Amount	A	%	A	%	A	%	A	%	A	%	A	%	A	%	A	%	A	%
The First group	4	30,8	9	69,2	0	0	4	30,8	4	30,8	5	38,4	5	38,5	6	36,1	2	15,4
The Second group	5	38,5	8	61,5	0	0	5	38,5	8	61,5	0	0	9	69,2	4	30,8	0	0

*A – amount of students.*

For the visual perception of the results of the experimental study, it is necessary, in our opinion, to represent them in the form of a diagram (Figure 1).



*Figure 1 Levels of formation of future kindergarten teachers' ethnocultural competence*

## Conclusions

Based on the foregoing, we can conclude that the nature of future kindergarten teachers' ethnocultural competence artistic and creative groups. An important component of future kindergarten teachers' vocational training is the formation of a specialist, who has a high level of ethnocultural competence formation.

One of the factors that can positively influence the formation of future kindergarten teachers' ethnocultural competence is a convergence of formal and non-formal education in higher education institutions, in particular in the artistic and creative groups of national orientation. The benefit of this convergence is the enrichment of the formal education components.

Thus, an example of an institution of higher pedagogical education that combines formal education with non-formal art one in artistic and creative groups is Poltava V.G. Korolenko National Pedagogical University.

In the process of artistic and educational activity in groups, future kindergarten teachers receive non-formal education by mastering the best examples of the musical, choreographic, visual, and literary art of the Ukrainian people. Therefore, favourable conditions are created for the development of the future specialists' mentality, formation of their ethnic morality, deepening of the ethnical self-consciousness, and formation of the ethnocultural competence. The necessity to converge formal education with non-formal art one in artistic and creative groups to form ethnocultural competences is proved by the results of the experiment. The experiment showed that the levels of ethnocultural competence in all the defined indicators (cultural and artistic, social and spiritual development) of future kindergarten teachers, who combined formal education

with non-formal one in artistic and creative groups, greatly outweigh those students who did not.

Concerning the experimental study results, we can assert that future kindergarten teachers, who has enriched formal education with non-formal art education and therefore has a well-formed Ukrainian mentality, ethnic morality, and ethical self-consciousness can become a carrier of the ethnocultural heritage of the Ukrainian people. In this regard, a feeling of originality, uniqueness, and beauty of ethnic achievements will allow creating an environment for new creative pursuits, discoveries, unique methods of self-expression of future kindergarten teachers and the young generation of our state, as well.

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# PLAGIĀTISMA ATKLĀŠANA UN NOVĒRŠANA STUDIJU PROCESĀ

## *Detecting and Preventing of Plagiarism in the Study Process*

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**Abstract.** *The educational work is based on the acquisition and use of previously created cultural, artistic and scientific values for the purpose of student growth. In the educational process works created by other authors may be used without the author's consent and payment of remuneration, provided the necessary conditions are met. However, these works are not always used in good faith, and quite often students use them without references, thus assigning them to self-writing, or ordering them to be written by others, in violation of the principle of academic integrity. Creativity is the main criterion for creating an author's work. However, authors are often influenced by previous works of other authors that they have seen, heard, felt, which is quite natural. When this influence goes beyond originality, the newly created work is recognized as plagiarism, or appropriation of authorship.*

*The aim of the study is to identify ways in which the works of other authors are unlawfully used in the study process, thus creating plagiarism, as well as offering solutions to reduce plagiarism.*

*In the research was used an analytical method of scientific research and method of grammatical, teleological, systemical and historical interpretation of legal norms. For the conclusions were used inductive and deductive method of scientific research.*

*In order to evaluate the legitimate use of the work of other authors in the study process, the data on recorded cases of plagiarism in universities in Latvia were reviewed. In order to analyse the issues of influence and misappropriation, disputes between authors of works in different countries were analysed.*

*The results of research highlighted that Latvian legislation provides extensive and detailed rights for students, but does not impose any obligations to them, and this legal framework should be improved.*

**Keywords:** *copyright, plagiarism, study process.*

### **Ievads**

#### ***Introduction***

Studējošo pienākums ir patstāvīgi studēt, tai skaitā, izstrādāt patstāvīgos rakstu darbus - referātus, esejas, studiju darbus, kvalifikācijas, bakalaura vai maģistra darbus. Visi šie rakstiskie darbi atbilst Autortiesību likumā

uzskaitītajiem literārajiem darbiem (Autortiesību likums, 2000, 4.1), par kuru autoru tiek uzskatīts studējošais.

Gandrīz visas augstskolas Latvijā ir izstrādājušas iekšējos normatīvos aktus plaģiātisma mazināšanai un novēršanai. Lai gan šo normatīvo aktu nosaukumi un teksti ir dažādi, visos ir noteiktas galvenās prasības darbu patstāvīgai izstrādei – darbs ir jārada pašam studējošajam, papildinot to ar citu autoru iepriekš uzrakstītiem tekstiem un vizuālo materiālu, dodot precīzas atsauces. Izglītības process ir balstīts uz iepriekš radīto kultūras, mākslas un zinātnes vērtību apgūšanu un izmantošanu studējošo izaugsmes mērķim. Citu autoru darbu izmantošanu izglītības procesā atļauj Autortiesību likums, ja tiek ievēroti nepieciešamie nosacījumi, kā citēšanai atbilstošais apjoms un autora vārda un darba nosaukuma norādīšana (Autortiesību likums, 2000, p. 21).

Tomēr ne vienmēr studiju procesā citu autoru darbi tiek godprātīgi izmantoti, studējošie diezgan bieži tos izmanto bez atsaucēm, tādējādi uzdodot par sevis rakstītiem. Ir arī sastopami gadījumi, kad studējošie pasūta uzrakstīt savus studiju darbus citai personai. Šāda rīcība jau uzskatāma par ļaunprātīgu studiju procesa pārkāpšanu un būtu nopietni sodāma, tomēr ne vienmēr to ir iespējams atklāt vai pierādīt. Akadēmiskais godīgums iet roku rokā ar vispārējo izpratni par godīgumu mūsu sabiedrībā. Laikā, kad sabiedrības ikdienā aizvien vairāk pieaug tehnoloģiju loma, kad internets ir kļuvis par ikdienas rīku informācijas ātrai un ērtai iegūšanai, šī tēma, kas skar akadēmisko godīgumu, kļūst īpaši aktuāla.

Interneta laikmetā lietotāju veidotās informatīvās platformas ļauj personām izveidot, izplatīt un piekļūt saturam dažādos formātos visā pasaulē. Lai arī tas padara informācijas iegūšanu vēl nebijuši vieglu, tas rada arī zināmas problēmas atbildības noteikšanā gadījumos, kad publicētais saturs ir aizsargāts ar autortiesībām (Valpētere, 2018). Plaģiāts ir pieaugoša problēma arī augstākajā izglītībā, un interneta izmantošana ir padarījusi šo problēmu visaptverošu. Daudzās valstīs šī problēma ir kļuvusi par diskusiju tematu, un augstākās izglītības iestādēm ir pienākums pārskatīt savu politiku attiecībā uz akadēmisko negodīgumu. Turcijā veiktajā pētījumā par interneta plaģiātismu augstākajā izglītībā tika atklāts, ka nevien skolēni un studējošie veido plaģiātu, bet autoru tiesības nereti pārkāpj arī pedagogi, kopējot un izplatot internetā iegūtus materiālus. Laika ierobežojumi, darba slodze un uzdevumu grūtības tika norādītas kā galvenie iemesli tendencēm uz interneta plaģiātu (Eret & Ok, 2014).

Diskusijas par akadēmisko un zinātnisko ētiku turpinās Vācijā, un parasti tās ir saistītas ar plaģiāta publisku izmeklēšanu politiķu akadēmiskajā darbībā. Vadošā loma šai darbībā ir Pētniecības ombudam (*Ombudsmann für die Wissenschaft*), kurš izmeklē ziņojumus par pārkāpumiem pētniecībā, stingri ievērojot caurspīdīguma un stingras konfidencialitātes principu, kā arī garantējot ziņotāja anonimitāti. (Ruipérez & García-Cabrero, 2016). Plaģiātam ir sociāla, akadēmiska un ekonomiska ietekme uz sabiedrību. Tas bremzē radošumu un

inovāciju radīšanas vietā sekmē atdarināšanu. Finansiālie zaudējumi tirdzniecībai un rūpniecībai ir visaptveroši, ja tiek veicināta plaģiātisma kultūra (Satija & Martínez-Ávila, 2019).

Pētījuma mērķis ir identificēt veidus, kā studiju procesā tiek prettiesiski izmantoti citu autoru radītie darbi, tādējādi veidojot plaģiātu, kā arī piedāvāt risinājumus plaģiātisma mazināšanai.

## **Metodoloģija** *Methodology*

Pētījumā tika izvērtēti plaģiātisma novēršanas noteikumi vairākās Latvijas augstskolās. Lai novērtētu citu autoru darbu likumīgu izmantošanu studiju procesā, pētījuma autore salīdzināja datus par fiksētajiem plaģiātisma gadījumiem Biznesa augstskolā Turība (turpmāk – BAT) laika posmā no 2016. līdz 2019. gadam. Lai analizētu autortiesību piesavināšanās problemātiku, tika analizēti dažādās valstīs notikušie strīdi starp darbu autoriem un personām, kas izmantojuši šo autoru darbus savu darbu veidošanā. Lai iegūtu datus par pasūtījuma darbu rakstīšanas piedāvājumiem, tika aplūkota interneta vietnē [www.ss.com](http://www.ss.com) pieejamā informācija.

Pētījumā tika izmantota analītiskā metode, lai izpētītu dažādu pētnieku veiktos pētījumus par plaģiātismu un tā novēršanu, kā arī tika izmantotas tiesību normu interpretācijas gramatiskā, sistēmiskā, teleoloģiskā un vēsturiskā metode, lai novērtētu esošo tiesisko normu nepietiekamo regulējumu un piedāvātu grozījumus ar plaģiāta novēršanu saistītos tiesību aktos. Secinājumu izdarīšanai izmantota induktīvā un deduktīvā zinātniskās pētniecības metode.

## **Citu autoru radīto darbu prettiesiska izmantošana studiju procesā** *Unlawfull use of works created by other authors in the study process*

Piesavināšanās māksla nereti robežojas ar plaģiātu, un siena starp šiem jēdzieniem ir gauži plāna. *Piesavināšanās māksla jeb appropriation art* ir jēdziens, ar ko mākslas tiesību kontekstā apzīmē "iepriekš radīta objekta vai attēla izmantošanu, to tikai nedaudz pārveidojot" (Žīgurs, 2017). Tomēr plaģiāts atšķirībā no ietekmēšanās ir pierādāms, piemēram, plaģiators ir izmantojis nepublicētu manuskriptu vai nepublicētu ideju (Svece, 2004).

Uzdodot darbu par savu (nenorādot atsaucis), studējošais pārkāpj autora tiesības uz autorību (tiesības tikt atzītam par autoru), kā arī tiesības uz vārdu (tiesības pieprasīt, lai viņa vārds būtu pienācīgi norādīts visās kopijās un jebkurā publiskā pasākumā). Neievērojot autora personiskās tiesības un pārkopējot viņa darbu savā darbā, vienlaikus tiek pārkāpta arī autora mantiskā tiesība uz darba reproducēšanu.

Lai izvairītos no plaģiātisma, studējošajiem ikreiz citējot vai citādi iekļaujot savā darbā cita autora darbu, ir nepārprotami jāatsaucas uz to, norādot attiecīgā darba nosaukumu un autoru, kā arī citu relevanto informāciju (Kalnāja-Zelča, 2014). Veidojot atsauci, noteikti ir jāmin autora vārds un darba nosaukums, kā arī izdevums (grāmata, žurnāls), kurā šis darbs ietverts, tā izdevējs, izdošanas vieta, gads un lappuse. Ja autors ir izmantojis savas tiesības nenorādīt vārdu pie publicēta vai publiskota darba, tad saskaņā ar Autortiesību likumā 8. pantā noteikto prezumpciju, autora vietā jānorāda redaktors vai izdevējs (Autortiesību likums, 2000, p. 8).

Ja tiek citēts darbs, kas atrodas (pieejams) internetā, tad grāmatas nosaukuma, izdevēja un izdošanas gada vietā jānorāda pilna interneta adrese (saikne jeb hiperlinks). Saskaņā ar Eiropas Savienības Tiesas nolēmumu *Sanoma lietā* (GS Media v. Sanoma Media, 2015) šādos gadījumos studentam nav obligāti jāpārliedz, vai autordarbs, uz kuru aizved viņa norādītā saikne, ir bijis likumīgi ievietots internetā - augšupielādēts ar autortiesību īpašnieka piekrišanu. Taču tas noteikti būtu jādara, ja izmantojums būtu komerciāls.

Latvijā ir notikušas atsevišķas tiesvedības, analizējot ietekmēšanās un piesavināšanās šauro robežu. Piemēram, 2003. gada decembrī Latvijas tiesa par plaģiātu atzina Raimonda Staprāna lugu „Postītājs”, kas veidota pēc Skaidrītes Annas Gailītes darba „...un tad ienāca postītājs” (Paklone, 2014, p/ 87).

Kriminālatbildība par autorības piesavināšanos, uzdodot darbu par savu un nenorādot autora vārdu, Latvijas tiesās tika skaitīta no 2008. līdz 2014. gadam. Šis strīds vistiešāk atsaucās uz izglītības procesu, jo vienas augstskolas (sprieduma rakstīšanas laikā Rēzeknes Augstskolas; jaunais nosaukums - Rēzeknes Tehnoloģiju akadēmijas) studente piesavinājās citas augstskolas (Vidzemes augstskolas) studentes rakstīto diplomdarbu un aizstāvēja to, uzdodot par pašas rakstītu. Viss būtu beidzies labi, ja augstskola nebūtu nolēmusi izdot grāmatu, kurā bija publicēts arī minētais diplomdarbs. To pamanīja diplomdarba autore un cēla prasību tiesā. Tomēr lietas iztiesāšanas laikā tika grozīta Krimināllikuma 148. pants, uz kura pamata tika celta prasība (Krimināllikums, 1998, 148), un process tika izbeigts (*Persona J.G. v. Persona Z.Š.*, 2014). Līdz ar to negodīgā studente tika cauri bez soda, bet īstā darba autore nesaņēma nekādu ne morālu, ne mantisku atlīdzību par viņai nodarīto personisko tiesību aizskārumu.

Vārds „*plaģiāts*” nav pieminēts ne Autortiesību likumā, ne kādā citā Latvijas vai starptautiskajā normatīvajā aktā. Tomēr Eiropas kultūrā šis jēdziens labi pazīstams vairāk nekā divtūkstoš gadu, kopš Romas impērijas laikiem, kur „*plagiare*” nozīmēja nolaupīt bērnu. Plaģiāta koncepts neaprobežojas tikai ar formālas tāpatības gadījumiem; publicēt darbu, kas ir citas personas darba adaptācija, un uzdot to par savu oriģināldarbu, arī ir plaģiāts (Paklone, 2014, p. 88). Oksfordas skaidrojošā vārdnīcas definē, ka „*plagiarizēt*” nozīmē kopēt

citas personas idejas, vārdus vai darbus un uzdot tos par savējiem (Wehmeier et al., 2005, 1149). Literatūras avotos tiek paplašināti skaidrots, ka tas ir „cita autora oriģināldarba vai tā daļu uzdošana par savējo” vai tāds „darbs, kurā veiktas nenozīmīgas satura vai formas izmaiņas (piemēram, romāna personām doti citi vārdi) vai kurš ievietots citā kontekstā” (Paklone, 1997, 41).

Tomēr pētījumā tika konstatēts, ka izglītības procesā šis vārds tiek lietots paplašināti, ietverot šajā jēdzienā arī citus akadēmiskā godīguma pārkāpumus, studējošo darbu rakstīšanu pēc pasūtījuma vai savu darbu atkārtotu iesniegšanu vairākiem pārbaudījumiem vai zinātniskiem pētījumiem – darbību, kas tiek apzīmēta ar jēdzienu „pašplaģiāts”.

Ja plaģiāts ir autortiesību pārkāpums, tad jāatzīst, ka ne katrs autortiesību pārkāpums ir plaģiāts. Autortiesības ir ierobežota laika monopolistiska kontrole, ko nacionālie likumi piešķir jebkuras mākslinieciskas, intelektuālas vai zinātniskas vienības radītājam. Bet autortiesību īpašniekam piešķirtās tiesības nav absolūtas, jo tajās ir iekļauts noteikums par darba godīgu izmantošanu zināšanu progresam un likumīgi atļauta lietošana nav ne autortiesību pārkāpums, ne plaģiāts (Satija & Martínez-Ávila, 2019).

Pētījums liecina, ka ne visi studējošie ne vienmēr pareizi izprot noteikumus par darba godīgu izmantošanu zināšanu progresam, ne arī likumā (Autortiesību likums, 2000) noteiktos izņēmumus par citu autoru darbu izmantošanu izglītības procesā. Neapzinās nepieciešamību atsaukties uz autora vārdu, kā arī neizprot, cik liels drīkst būt citēšanai pieļautais apjoms. Jaunā paaudze, kas veidojusies tā sauktajā „informācijas sabiedrībā”, internetu uztver kā savas dzīves telpas dabisku paplašinājumu. Uz jautājumu, kas ir publiskā vietā atrodošies darbi, kuru izmantošanu personīgiem mērķiem atļauj likums, studējošie atbilst, ka tie ir internetā atrodamie darbi. Autortiesību likumā (2000) 25. pantā ir neprecīzi izteikta Autortiesību direktīvā (Par dažu autortiesību un blakustiesību aspektu saskaņošanu informācijas sabiedrībā, 2001, 5.3.h) noteiktā prasība, ka bez autora atļaujas drīkst personiskām vajadzībām fotografēt un publiskot darbus, piemēram, arhitektūras vai tēlniecības darbus, kas radīti pastāvīgai eksponēšanai sabiedriskās vietās. Lai šo nepareizo interpretāciju novērstu, būtu nepieciešams Autortiesību likuma 25. pantu papildināt ar daļu, kas nosaka, ka šajā pantā minētais neattiecas uz gadījumiem, kad minēto darbu attēlojums ir pieejams sabiedrībai internetā (pa vadiem vai citādā veidā tādējādi, ka tam var piekļūt individuāli izraudzītā vietā un individuāli izraudzītā laikā).

### **Darbu rakstīšana pēc pasūtījuma**

#### ***Commissioning to another person to write the work***

Pētījuma procesā tika konstatēti gadījumi, kad studējošie pasūta uzrakstīt savus studiju darbus citai personai. Šāda rīcība uzskatāma par ļaunprātīgu studiju

procesa pārkāpšanu un būtu nopietni sodāma, tomēr ne vienmēr šo pārkāpumu ir iespējams atklāt vai pierādīt.

Atverot sludinājumu portālu *www.ss.com*, redzams, ka plaši tiek piedāvāts izstrādāt visu līmeņu darbus – mājas darbus, referātus, prakses atskaites, kursa darbus, diplomdarbus utt. Aplūkojot šo vietni 31.12.2019, redzams, ka 141 persona piedāvā kursa darbu, referātu un diplomdarbu rakstīšanas pakalpojumus (Sludinājumi, 2019).

Ar šādu "pakalpojumu sniegšanu" nodarbojas gan individuāli darboņi, gan uzņēmumi. Ļoti plaši tiek piedāvāts izstrādāt darbus arī tiesību zinātņu studijās. Piemēram, kāds "juridiskais birojs" piedāvā: "izstrādāt kvalitatīvus kvalifikācijas darbus, diplomdarbus un maģistra darbus studentiem (potenciālajiem kolēģiem) jebkurā tiesību zinātņu nozarē, kuriem nav iespējas un laika izstrādāt tos pašiem." Vēl šāds sludinājums vietnē *www.ss.com*: "Sniedzam maģistra darbu, bakalaura darbu, citu oriģinālu studiju darbu izstrādi no A līdz Z, kuri tiks noformēti atbilstoši metodiskajiem norādījumiem, un darba izpildes laikā Jums tiks veiktas visas korekcijas pēc darba vadītāja norādījumiem (Sludinājumi, 2019).

Rēgu rakstnieku (*ghostwriter*) fenomens ir plaši sastopams dažādās cilvēka intelektuālās un radošās darbības jomās, taču tieši akadēmiskajā jomā tas raisa visasākās diskusijas par attiecīgās darbības pieļaujamību un nepieciešamību to izskaust ar dažādiem tiesiskiem instrumentiem (Gulbis, 2016). Šādi rakstītus darbus ir ļoti grūti konstatēt, un reizēm pārņem skumja bezspēcības sajūta, kad redzi, ka darbs nevar būt paša studenta rakstīts (jo tas vai nu neatbilst viņa vispārējam zināšanu un izpratnes līmenim, vai ir uzrakstīts pārāk ātri), bet to nav iespējams pierādīt, un studējošais var triumfēt par darba vadītāja un recenzenta veiksmīgu apmānīšanu. Katrai augstskolai Latvijā ir izveidoti iekšējās kārtības noteikumi, kas regulē atsauču veidošanu, un katra no tām ir izvēlējusies nedaudz atšķirīgu formu, tas ir darīts ar mērķi, lai vieglāk varētu atklāt plaģiātu, lai studējošajiem nebūtu tik vienkārši izmantot citu augstskolu studentu radītos darbus savu darbu veidošanai. Tomēr arī tas ne vienmēr atklāj darba patieso autoru, jo „rēgu rakstnieki” parasti rūpīgi iepazīstas ar attiecīgās augstskolas noformēšanas noteikumiem.

Reizēm šādus negodīgus studentus gan aptur Valsts pārbaudījuma komisija, jo darba aizstāvēšanas laikā tie nespēj atbildēt uz komisijas uzdotajiem jautājumiem, taču, ja arī prezentāciju kāds palīdzējis labi sagatavot, var gadīties, ka darbs tiek aizstāvēts, atzīme tiek izlikta un nenopelnītais diploms tiek izsniegts.

Jāpiebilst gan, ka reizēm šāda rīcība studentam izvēršas par ļoti rūgtu mācību. Piemēram, ja darba rakstītājs vienu un to pašu darbu ar nelieliem grozījumiem piedāvā divu vai vairāku augstskolu studentiem. Tad uzvarētājs ir tas, kurš pirmais augšupielādējis darbu plaģiātisma kontroles sistēmā, bet atlikušajiem jāsamierinās ar plaģiāta konstatēšanu un eksmatrikulāciju. Tādā veidā viņi zaudē ne vien „rakstniekam” samaksāto honorāru, bet arī studiju

maksas daļu, kas paredzēta darba aizstāvēšanai. Ja tomēr students vēlas pabeigt studijas un aizstāvēt (cerams) paša rakstītu jaunu darbu, viņam jāmaksā papildus maksa.

Ja darbs ir rakstīts pēc pasūtījuma, tad nav notikusi autorības piesavināšanās jeb plaģiāts klasiskajā izpratnē. Autors drīkst savu darbu parakstīt ar savu vārdu vai ar pseidonīmu, vai vispār nenorādīt savu vārdu. Latvijas likums nosaka autoram tiesības pieprasīt, lai viņa vārds būtu norādīts, kā arī tiesības pieprasīt anonimitāti (Autortiesību likums, 2010, 14). Tas nozīmē, ka darbu rakstīšana pēc pasūtījuma un sava vārda nenorādīšana pilnībā atbilst tiesību normu prasībām un neveido autortiesību pārkāpumu.

Tomēr šāda rīcība veido izglītības noteikumu pārkāpumu, jo studējošais nepilda pienākumu apgūt pamatizglītības programmu, kā arī ievērot izglītības iestādes iekšējos normatīvos aktus (Izglītības likums, 1998, p. 54). Kā norāda Augstākā tiesa savās atziņās “tiesību uz izglītību īstenošana ir nesaraujamai saistīta ar izglītojamo jeb pašu skolēnu pienākumiem izglītības iegūšanas procesā. Izglītojamo pienākumi ir vērsti uz to, lai skolēni pēc iespējas efektīvāk varētu apgūt izglītības programmu” (Persona A v. Rīgas domes Izglītības, kultūras un sporta departaments, 2017).

Taču Izglītības likuma noteikumi attiecas tikai uz pamatizglītības programmu, bet nenosaka pienākumu apgūt vidējo vai augstāko izglītību. Speciālais likums attiecībā uz studējošajiem ir Augstskolu likums (1995), kurā diemžēl nav ne vārda par studējošo jebkādiem pienākumiem.

Izglītības noteikumu pārkāpšana netiek uzskatīta ne par administratīvu, ne kriminālu pārkāpumu, par to nav paredzēti nekādi sodi. Visi pienākumi un atbildība izglītības jomā gulstas uz izglītības iestādēm. Piemēram - par studiju līguma noteikumu pārkāpšanu var uzlikt naudas sodu izglītības iestādes vadītājam, bet nekāds sods nav paredzēts studējošajam (Latvijas Administratīvo pārkāpumu kodekss, 1984, 201.59) Tiesību akts zaudēs spēku 2020. gada 1. jūlijā, un to nomainīs jaunais Administratīvās atbildības likums (2018), savukārt katras nozares pārkāpumi un sodi tiks noteikti speciālajos likumos. Tas nozīmē, ka attiecībā uz augstākās izglītības iegūvi tos vajadzētu noteikt Augstskolu likumā, tomēr nekādas darbības, lai to īstenotu, šobrīd netiek veiktas.

### **Augstskolu izstrādātie noteikumi plaģiātisma novēršanai** ***Rules for the prevention of plagiarism by higher education institutions***

Pētniecības ombuds Vācijā ir izstrādājis un plaši izplatījis paškontroles rokasgrāmata. Tā ietekmē daudzas universitātes Vācijā ir izveidojušas pašas savu Pētniecības ombuda biroju, kas ir ļāvis standartizēt kritērijus negodīgas rīcības noteikšanai un īstenošanai (Ruipérez & García-Cabrero, 2016).

Gandrīz visas Latvijas augstskolas ir izstrādājušas noteikumus akadēmiskā godīguma nodrošināšanai, lai izskaustu vai vismaz samazinātu plaģiātismu un paaugstinātu studējošo izpratni par nepieciešamību apgūt savu profesiju, nevis tikai iegūt diplomu. Paraugus iekšējo normatīvo aktu izstrādāšanai augstskolas ir ņēmušas gan no nevalstiskās organizācijas Akadēmiskā godīguma centrs izstrādātajiem dokumentiem, gan no ārvalstu augstskolu, piemēram, Kembridžas universitātes izstrādātajiem iekšējiem normatīvajiem aktiem, gan citiem dokumentiem. Turklāt, katrai augstskolai ir izveidoti noteikumi atsauču veidošanai, un katra no tām ir izvēlējusies nedaudz atšķirīgu formu. Tas, galvenokārt, ir darīts ar mērķi, lai vieglāk varētu atklāt plaģiātu, lai studējošajiem nebūtu tik vienkārši izmantot citu augstskolu studentu radītos darbus savu darbu veidošanai.

Latvijas Universitāte definē plaģiātu kā cita autora publicētu vai nepublicētu darbu (t.sk. vārdu, izteikumu u. c.) izmantošana, nenorādot precīzu atsauci uz attiecīgo autoru un/vai darbu. Studējošajam par šo plaģiāta iesniegšanu draud sods līdz pat eksmatrikulācijai (Noteikumi par akadēmisko godīgumu, 2016).

Rīgas Tehniskā universitāte nosaka, ka plaģiāts ir cita autora publicētu vai nepublicētu darbu (t.sk. vārdu, izteikumu u.c.) izmantošana, nenorādot precīzu atsauci uz attiecīgo autoru un/vai darbu. Par plaģiāta iesniegšanu studējošajam piemēro brīdinājumu par eksmatrikulāciju vai eksmatrikulē. (Akadēmiskā godīguma kodekss, 2016).

Rēzeknes Tehnoloģiju akadēmija brīdina studējošos būt uzmanīgiem, lai nepārkāptu autortiesības un nepasludinātu cita autora paveikto par savu darbu, t.i., nenodarbotos ar plaģiātismu. Darbu kontekstā nopietnākie zinātnieka ētikas pārkāpumi ir saistīti ar akadēmiskā godīguma principu pārkāpumiem zinātniskajā darbībā, tai skaitā - citu personu publicēto un nepublicēto pētījumu izmantošana bez attiecīgas atsauces. Ja plaģiāts tiek konstatēts studiju laika pētniecības darbā, tad atkarībā no konstatētā plaģiāta apjoma studentam var tikt samazināts vērtējums vai uzdots izstrādāt citu darbu (par citu tematu) un ierosināt akadēmijas vadībai izteikt studentam brīdinājumu par eksmatrikulāciju. Ja plaģiāts tiek konstatēts noslēguma bakalaura darbā vai maģistra darbā, students tiek eksmatrikulēts (Metodiskie norādījumi, 2016).

BAT ir izstrādāta virkne iekšējo normatīvo aktu cīņai ar plaģiātismu. Nolikums par studējošo patstāvīgo darbu izstrādāšanu (Nolikums par studējošo patstāvīgo darbu izstrādāšanu, 2015) nosaka secību un kārtību, kā jāraksta patstāvīgie darbi, īpašu uzmanību veltot atsauču noformēšanai.) Speciālais nolikums akadēmiskā godīguma nodrošināšanai definē atsevišķus plaģiāta veidus, raksturojot katru no tiem. (Nolikums par akadēmisko godīgumu un plaģiātismu, 2017). BAT Studiju nolikums nosaka studējošajiem pienākumu godprātīgi studēt attiecīgās studiju programmas ietvaros, un, veicot pētījumus, izmantot citu autoru darbus tikai izmantošanas mērķim atbilstošā apjomā, obligāti norādot izmantotā

darba autoru un nosaukumu. Ir noteikts, ka katram pārbaudījumam jāiesniedz atbilstoši prasībām veidots darbs un nav tiesību iesniegt vienu darbu vairākas reizes, ja tajā nav veikti būtiski papildinājumi. Studiju nolikums paredz gadījumus, kad studējošais nav bijis godprātīgs un iesniedzis darbu, kas ir plaģiāts, vai atkārtoti iesniedzis vienu un to pašu darbu bez būtiskiem papildinājumiem. Šādos gadījumos studējošajam darbs ir jāveic atkārtoti, bet atkārtota pārkāpuma gadījumā studējošais tiek eksmatrikulēts (Studiju nolikums, 2018). Valsts pārbaudījuma nolikums regulē gadījumus, kad studējošais ir iesniedzis plaģiātu noslēguma darbu (kvalifikācijas darbā, diplomdarba vai maģistra darba) aizstāvēšanai. Studiju nolikums šādā situācijā attiecīgi nosaka, ka studējošais tiek eksmatrikulēts ar tiesībām triju gadu laikā atkārtoti izstrādāt un iesniegt darbu aizstāvēšanai, bet, ja darbā tiek konstatētas plaģiātisma pazīmes atkārtoti, tad studējošais tiek eksmatrikulēts bez tiesībām aizstāvēt darbu (Valsts pārbaudījuma nolikums, 2016).

### **Plaģiāta atklāšanas metodes** *Methods of detection of plagiarism*

Saskaņā ar jaunākajiem pieejamajiem datiem 2014. gadā Vācijas Pētniecības ombuds saņēma 63 ziņojumus, deviņos no tiem tika sākta īpaša procedūra. Vairāk nekā puse bija saistīta ar acīmredzamām akadēmiskā godīguma tēmām: 32% bija saistīti ar autorību konfliktiem (parasti tas ir saistīts ar līdzstrādnieku veidotiem pētījumiem, kurus bija parakstījis akadēmiskais vadītājs vai projekta vadītājs), un 22% bija saistīti ar plaģiātu (Ruipérez & García-Cabrero, 2016).

Plaģiāta atklāšanai pēdējos gados tiek izmantotas dažādas datorprogrammas, kas palīdz uzzināt aizgūto vai nozagto tekstu jaunajā dokumentā, ja tāds ir, un arī saskaita līdzības procentus starp aizdomās turēto tekstu un milzīgo anti-plaģiātu programmatūras datu bāzi. Plaģiāta programmatūra nepārbauda, vai kādā darba daļā nav plaģiāta. Tā vietā tas tikai pārbauda darbu, salīdzinot ar milzīgo, bet ierobežoto datu bāzi, un, ja ir gadījumi, kad jaunais teksts ir tieši tāds pats vai līdzīgs kādam no datu bāzes avotiem, tas izceļ šo pārklāšanos, kā arī norādu uz sākotnējiem avotiem (Satija, & Martínez-Ávila, 2019).

Interneta vidē atrodami vairāki piedāvājumi pārbaudīt plaģiāta esamību autoru darbos. Dažreiz tie ir pieejami bez maksas, dažreiz tikai par samaksu. Tomēr ir ļoti jāuzmanās savu darbu publiskošanu (augšuplādēšanu) šajos rīkos, ja nav pārlicības par datu atbilstošu un likumīgu tālāko izmantošanu. Ir dzirdēts, ka šie rīki ir izveidoti, lai iegūtu lielu apjomu autoru darbus, kurus pēc tam var izmantot visdažādākajos veidos. Tāpēc pirms atdodam savu garīgās darbības rezultātu (autordarbu) izmantošanai, ir jābūt pilnīgai pārlicībai, ka tas tiks izmantots atbilstoši autora interesēm.

Viens no plaģiāta atklāšanas rīkiem, par kura izcelsmi un darbu likumīgu izmantošanu nav šaubu, ir Latvijas augstskolu kopīgiem spēkiem izveidotā vienotā datorizētā plaģiātisma kontroles sistēma (turpmāk - VDPKS), kurā darbus iespējams salīdzināt ar 16 Latvijas augstskolās studējošo izstrādātajiem darbiem, kā arī ar tīmeklī atrastiem dokumentiem. BAT ir pievienojusies šai sistēmai, un pārbauda tajā katru iesniegto kvalifikācijas, bakalaura, maģistra un doktora darbu. Ik semestri vairāki studējošie netiek pielaisti pie darba aizstāvēšanas un ir spiesti atkārtoti izstrādāt un iesniegt savu darbu un par aizstāvēšanu maksāt papildu maksu. Saskaņā ar BAT noteikumiem, ja darbā tiek konstatētas sakritības ar kādu no VDPKS ievietotajiem darbiem no 15% līdz 30% apjomā, darbs tiek vērtēts fakultātes dekāna organizētā komisijā trīs personāla sastāvā. Taču, ja darbā tiek konstatētas sakritības vairāk nekā 30% apmērā, tas tiek uzskatīts par plaģiātu bez turpmākām pārbaudēm.

Juridiskās fakultātes studentu darbus komisija pārbauda pēc kritērijiem, kas noteikti fakultātes dekāna rīkojumā, un darbs tiek atzīts par plaģiātu it sevišķi, ja darbā ir atrodamas sakritības:

- 1) studējošā it kā paša izteiktajā viedoklī, komentārā, secinājumos vai priekšlikumos,
- 2) avotu izmantošanas secībā tiesību aktu, literatūras vai judikatūras citātos,
- 3) vienādas drukas kļūdas vai raksturīgas frāzes.

Datubāzē parasti ir ārkārtīgi liels internetā atrodamo vietņu skaits: gan aktīvās, gan arhivētās, kā arī liela dokumentu kolekcija. Lai arī datu bāzē ir tūkstošiem dažādu žurnālu, e-grāmatu un tīmekļa lapu, tomēr tajā, iespējams, nav viss par doto tēmu. Tāpēc daži plaģiāti netiek atpazīti (Satija, & Martínez-Ávila, 2019). It sevišķi tas attiecas uz tekstiem, kas tulkoti no svešvalodām. Tomēr zināmas cerības ir sagaidīt progresu arī šajā jautājumā. Erasmus+ projekta "Eiropas līmeņa tīkls akadēmiskā godīguma veicināšanai" ietvaros izstrādātajās „Akadēmiskā godīguma vispārējās vadlīnijās” kā viens no plaģiātisma veidiem tika norādīts tulkošanas plaģiātisms, tas ir - saturs, kas no oriģinālvalodas ir pārtulkots citā valodā un atkārtoti lietots bez oriģināla autora atzīšanas. Līdzīgu dokumentu atrašanas panākumi ir atkarīgi arī no programmatūras spējas atklāt starpvalodu plaģiātismu (t. i., plaģiātismu saturošs dokuments ir oriģināldokumenta mašīntulkojums vai cilvēka tulkojums) (Tauginienė et al., 2019). Čehijas Mendela universitātes (Mendel University in Brno) profesors Tomass Foltineks (Tomáš Foltýnek) piedalījās projektā „Plaģiāta politikas ietekme augstākajā izglītībā visā Eiropā” un veica plaģiāta noteikšanas rīku izstrādi. Projekta ietvaros jau pieejama terminu vārdnīca un drīz tiks izveidotas arī Akadēmiskās integritātes vadlīnijas un Starppozaru sadarbības rokasgrāmata, kā arī Izglītojošo materiālu krājums. Šie rīki pieejami Eiropas Akadēmiskās integritātes tīkla (ENAI) mājas lapā (2018).

Teksta salīdzināšanas programmatūru dažkārt kļūdaini sauc par “plaģiātisma noteikšanas programmatūru” jeb “plaģiātisma pārbaudītāju”. Teksta salīdzināšanas programmatūra veido līdzības atskaites, pārbaudot iesniegtā dokumenta līdzību ar resursiem savās datubāzēs, ko parasti veido interneta avoti, žurnālu un konferenču raksti, grāmatas un studentu darbi. Līdzības atskaites norāda uz līdzībām starp iesniegto darbu un citiem avotiem datubāzēs. Ne visas līdzības, ko izceļ teksta salīdzināšanas programmatūra, ir plaģiātisma dēļ. Pētnieki norāda, ka šīs līdzības noteikti ir jāpārbauda cilvēkam (Tauginienē et al., 2019). Šī pieeja nešaubīgi tiek izmantota BAT plaģiātisma atklāšanas un novēršanas procesā rūpīgi izanalizē visus vienādos tekstus, un plaģiātisms netiek atzīts gadījumos, kas sakrīt likuma teksti, tiesu nolēmumi un citi avoti, kuri netiek aizsargāti ar autortiesībām.

## Pētījuma rezultāti

### *Results*

Lai novērtētu plaģiātisma attīstības vispārējo tendenci, tika salīdzināti dati par fiksētajiem plaģiātisma gadījumiem BAT Juridiskajā fakultātē laika posmā no 2016. līdz 2019. gadam.

Šajā periodā kopumā tika fiksēti 23 plaģiāti, no tiem pirmā līmeņa studiju programmās – piecas reizes, bet bakalaura un maģistra studiju programmās katrā pa astoņām reizēm. Kā redzams, augstāku izglītības līmeņu apgūšana nemazina studējošo negodīgās tieksmes, izmantot citu autoru darbus sava „slinkuma lāpšanai”. Tomēr BAT Juridiskajā fakultātē ir skaidri novērojama pārkāpumu samazināšanās tendence:

- 1) 2016.gadā, kad BAT uzsāka izmantot VDPKS, tika fiksēti desmit plaģiāta gadījumi;
- 2) 2017.gadā, lai arī nedaudz, bet šo gadījumu skaits samazinājās līdz astoņiem;
- 3) 2018.gadā jau bija jūtams būtisks progress, jo tika konstatēti tikai trīs plaģiātisma gadījumi;
- 4) 2019.gadā tika konstatēti tikai divi plaģiātisma gadījumi pavasara sesijā, bet rudens sesijā vairs nebija neviena plaģiāta!

Sešos no minētajiem gadījumiem konstatēti vienādi teksti ar kāda cita autora darbu vairāk nekā 30% apjomā, kas atzīstams par plaģiātu bez papildus pārbažu veikšanas. Interesanti norādīt, ka četros gadījumos šī procentu apjoms tika būtiski pārsniegts, un darbos tika konstatēti vienādi teksti 53% un pat 71% apmērā. Pārējos gadījumos vienādo tekstu apjoms svārstījās no 15% līdz 30% robežās. Šajos gadījumos darbs tika vērtēts speciālā plaģiātisma novēršanas komisijā trīs personu sastāvā, un darbs tika atzīts par plaģiātu gadījumos, kad tika fiksēta tekstu sakritība studējošā it kā paša izteiktajā viedoklī, secinājumu un priekšlikumu daļā,

vai arī ja fiksēta sakritība vairāku citātu secībā. Vēl tika pievērsta uzmanība arī drukas kļūdām un dažādu mazo vārdu (partikulu, saikļu u.c.) lietošanai darbā, kas nepārprotami norādīja uz darba pārkopēšanu no cita avota. Tika konstatēti arī gadījumi, kad darbs ir kompilēts no vairākiem citu autoru darbiem. Piemēram, vienā gadījumā studējošais bija izmantojis citas augstskolas studentu rakstītos darbus 13% un 11% apmērā, kā arī divus tīmeklī atrastus darbus 16% un 13% apmērā. Tā kā visi šie darbi bija izmantoti bez atsaucēm, tad vienādo tekstu apjoms tika summēts, rezultātā sasniedzot vienādus tekstus 53% apmērā, kas, protams, tika atzīts par plaģiātu.

Pētījumā secināts, ka galvenokārt studenti izmantoja BAT vai Latvijas Universitātes studentu darbus, bet ir atsevišķi gadījumi, kad darbi tiek kopēti no Rīgas Stradiņa Universitātē un Daugavpils Universitātē rakstītiem darbiem. Visos šajos gadījumos fakultātes dekāns izdeva rīkojumu, ka darbs nav virzāms aizstāvēšanai, un studenti tika eksmatrikulēti ar tiesībām iesniegt apstiprināšanai jaunu tēmas pieteikumu, patstāvīgi izstrādāt jaunu darbu un iesniegt to aizstāvēšanai atkārtoti. Rīkojumā ir noteikts arī, ka darba nākamā aizstāvēšana būs pa maksu, un ka atkārtota plaģiāta gadījumā studējošais tiks eksmatrikulēts bez tiesībām aizstāvēt darbu atkārtoti.

### **Secinājumi un priekšlikumi** *Conclusions and recommendations*

Lai gan gandrīz visas augstskolas ir centušās izskaust gan plaģiātismu, gan citādu negodīgu rīcību, tomēr neviens no izstrādātajiem iekšējās kārtības noteikumiem plaģiātisma novēršanai, ne arī plaģiāta atklāšanas rīki pilnībā nepasargā studiju procesu no negodprātīgiem studentiem.

Daļēji šāda situācija ir izveidojusies tāpēc, ka Augstskolu likumā (Augstskolu likums, 1995) studējošajiem nav noteikti nekādi pienākumi, toties ir noteiktas plašas un detalizētas tiesības. Akadēmiskais godīgums iet roku rokā ar vispārējo izpratni par godīgumu mūsu sabiedrībā. Autordarbu neatļauta izmantošana studiju procesā ir daudz bīstamākā, kā varētu šķist pirmajā brīdī, jo tā veido nepareizu attieksmi pret citu cilvēku radītajām vērtībām, veido tiesisko nihilismu un attīsta krāpnieciskās tieksmes.

Lai to nepieļautu, Augstskolu likumā vajadzētu iekļaut ne vien tiesības, bet arī pienākumus studējošajam studēt godīgi, kā arī noteikt kritērijus, kad studējošo rīcība tiek atzīta par negodīgu, un viņi tiek sodīti, vai pat viņiem tiek liegtas turpmākās studijas. Tie varētu būt dažādi autortiesību pārkāpumi, neatļautu palīglīdzekļu izmantošana, viena un to paša darba atkārtota iesniegšana dažādiem pārbaudījumiem, citas personas veidota darbu iesniegšana kā savējā u.tml. Iespējams, ka tas liktu studējošajiem rūpīgāk apdomāt, vai ir vērts imitēt studēšanu, lai saņemtu tikai diplomu, nevis izglītību un profesiju, jo savā

profesionālajā darbībā šāds viltus speciālists nespēs izturēt konkurenci un negūs ne panākumus, ne gandarījumu par paveikto!

Papildus būtu jāiekļauj Autortiesību likumā skaidrāki noteikumi attiecībā uz darbu izmantošanu izglītības mērķiem. Kā arī precīzāk jānorāda, ka internets nav uzskatāms par publisku vietu Autortiesību likuma izpratnē.

### **Summary**

It is the students' duty to study successfully and independently, including writing their own study papers, referring to the sources used in these papers. However, the work of other authors in the study process is not always used in good faith. Students often use them without references, thus submitting them as if they were written by themselves. There are also cases when students commission another person to write his study paper. Such behaviour is considered as a malicious violation of the study process and would be severely punished, but it is not always possible to detect or prove it.

In order to evaluate the legitimate use of the work of other authors in the study process, the data on recorded cases of plagiarism in universities in Latvia were reviewed. In order to analyse the issues of influence and misappropriation, disputes between authors of works in different countries were analysed.

In order to evaluate the general trend of plagiarism development, data on recorded cases of plagiarism at the Turība University were compared. Between 2016 and 2019, 23 plagiarisms were detected, of which five were in first-level study programs and eight in bachelor and master programs. Obviously, acquiring higher levels of education does not diminish students' dishonesty, but nevertheless there is a clear downward trend in violations.

Although almost all HEI have tried to eliminate plagiarism and other forms of unfairness, none of the internal rules for the prevention of plagiarism or tools for detecting plagiarism fully protect the study process from unscrupulous students.

The results of research highlighted that Latvian legislation provides extensive and detailed rights for students, but does not impose any obligations to them, and this legal framework should be improved.

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## СОВРЕМЕННЫЕ МЕТОДЫ ПРЕПОДАВАНИЯ ФИЛОСОФИИ В УНИВЕРСИТЕТЕ И ИХ ПЕДАГОГИЧЕСКИЕ СМЫСЛЫ

### *Modern Methods of Teaching Philosophy at the University and their Pedagogical Meanings*

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**Abstract.** *The dynamism and uncertainty of modern social life is a challenge for the entire education system and for philosophy as an educational discipline, in particular. The relevance of the work is associated with new requests for a new philosophical understanding of the world and life in university education. In this work, using theoretical analysis methods based on practical teaching experience, we propose an innovative approach to teaching philosophy as a technique and practice of public dialogical practice, built on the wonderment and rethinking of the ordinary and stereotypical. The purpose of this study is the theoretical and methodological justification of teaching methods of philosophy, oriented on the actualization of thinking here-and-now. The research methodology is based on a combination of general scientific theoretical methods and empirical methods of observation and comparison. The practice of applying the teaching methods described in the work is experimental. The development, testing and adjustment of the described philosophy teaching practices took place during the last 3 years of work at Pskov State University among first-year students of the undergraduate department of the Faculty of Finance and Economics. The complex use of this kind of techniques for students in philosophy classes in the experimental groups, in comparison with the results in the control groups, with other conditions being equal, yielded the following results: students in the experimental groups consistently showed better average results than students in control groups.*

**Keywords:** *philosophy teaching methodology, philosophy-in-action, thinking techniques.*

### **Введение** *Introduction*

Последнее время дискуссии относительно места философии в университетском образовании характеризуются, по меньшей мере, двумя тенденциями. Первую из них можно обозначить как официальную. В общем виде, это компетентностный подход. Вторая тенденция состоит в понимании философии как лично-ориентированной практики, свободной от задач непосредственной профессиональной ориентации.

Актуальность настоящей работы в обозначенном контексте определяется сложными пересечениями этих тенденций в практике образования и в общественной жизни в целом. Методика преподавания и изучения философии, на наш взгляд, должна быть решительно пересмотрена в связи с трансформацией антропологической модели, каковая не смотря на свою завуалированность, представляет собой проблему глобального значения. Многие полагают, что эта модель есть лишь переформулировка имеющихся форм и методов. Такая трактовка снимает проблему, а точнее редуцирует её до вопроса о языке педагогических терминов. Представляется, что такое объяснение в корне не верно, так как в компетентностном подходе происходит радикальное переопределение того, что такое человек, а такого рода операцию совершенно недопустимо сводить к очередной языковой игре в силу её радикальности.

Целью настоящего исследования является обоснование методов преподавания философии, ориентирующихся на актуализацию мышления здесь-и-сейчас, а не на предметное знание и гипотетические профессиональные навыки. В теоретическом и аксиологическом смысле исследование опирается на представление о философии как духовном упражнении (Hadot, 2001), на некоторые педагогические идеи о знании-в-действии (knowing-in-action) Дональда Шона (Schon, 1983) и философии-в-действии (philosophy-in-action) Кристофера Ходжинсона (Hodgkinson, 1991).

### **Методология** *Methodology*

Методология исследования представляет собой сочетание общенаучных теоретических методов (абстрагирование, анализ, синтез, обобщение) и эмпирических методов наблюдения и сравнения. Практика применения описанных в работе методик преподавания носит экспериментальный характер. Разработка, апробация и корректировка описанных практик преподавания философии проходили в течение последних 3 лет работы в Псковском государственном университете среди студентов первых курсов бакалавриата финансово-экономического факультета. Активизация учебного процесса, уровень учебной активности учащихся, повышение эффективности в решении мыслительных задач служили предварительными критериями оценки применяемых методов. Исследование проходило в процессе учебной работы в весенних семестрах 2016/2017, 2017/2018, 2018/2019 учебных годов. В одной из двух учебных групп факультета (контрольная группа) использовалась классическая форма организации семинарских занятий, основанная на коллективных

вопросах и работе с учебной литературой, в другой группе (экспериментальная группа) большая часть содержательной стороны курса была вынесена на самостоятельное изучение, а сами семинарские занятия проходили в форме дискуссий и обсуждений набора творческих заданий, образцы некоторых из которых приведены в статье. Средняя численность групп – 21-24 человека. В общей сложности, в исследовании приняли участие 147 студентов. Промежуточные формы контроля в обеих групп были идентичными – защита рабочих листов по ключевым темам, итоговая контрольная работа, эссе и экзамен. Эссе подвергались независимой оценке специалистов разных кафедр по системе определённых заранее критериев. Результаты исследования анализировались по двум параметрам – эссе и итоговая контрольная работа.

### **Результаты исследования**

#### ***Research results***

Философия как учебная дисциплина сейчас столкнулась с вызовами, с которыми не сталкивалась никогда. Это информатизация, глобализация, сциентификация, унификация, глубокая профессионализация и проэкономическая ориентация образования. Понятием-маркером трансформации системы выступает понятие компетенции. Самоориентация философии в этой ситуации, а главным образом скорость и успешность этой самоориентации, имеют важное значение.

Можно выделить четыре элемента доминирующей в настоящее время официальной тенденции. Во-первых, считается (Shippmann etc., 2000), что собственно понятие компетенции появляется в теории управления персоналом и бизнес-психологии, где используется для обоснования эффективной эксплуатации human resources. Во-вторых, компетенция, прежде всего, это критерий и способ оценки, используемый в контексте определения соответствия работника предполагаемой или занимаемой должности, его поощрения либо наказания. В-третьих, формирование компетенций в принципе ориентировано на развитие внешних по отношению к индивиду универсальных и потенциально «востребованных» бизнесом качеств. В-четвёртых, уровни освоения компетенций привносят в качестве описания результативности вполне определённый иерархический порядок, совместимый со стандартными уровнями корпоративного участия в соответствии с предписанными функциональными обязанностями на разных этажах корпоративного целого (Dreyfus & Dreyfus, 1980).

Наибольшим радикализмом отличается основополагающая максима компетентностного подхода, что человек – это персонал. Если в бизнес-

психологии такого рода стратегия выглядит как естественное методологическое сужение объёма термина в эвристических целях, то в контексте целей и задач педагогики такая трактовка предстаёт как крайне опасный в своей прямолинейности прагмато-функционализм, сводящий человека к инструментальной задаче в системе корпоративных бизнес-стратегий. Итогом является то, что многовековая традиция развития способностей свободного и самозначимого человека прекращается, по крайней мере, официально.

Образование в ситуации этого тотального менеджмента по подготовке персонала превращается в прогрессирующее развитие неадекватности посредством использования амбициозности. Таким образом, человек становится эпизодическим бизнес-проектом. Другими словами, хотя речь и идёт о формировании «разносторонней личности», но вся остальная риторика делает такую задачу несколько дополнительной, так как личностная разносторонность контекстуально мыслится исключительно в кругу профессиональных задач как подспорье их успешному решению. Дилемма выглядит так: развиваем человека, который ещё и является профессионалом, либо формируем профессионала, который ради успеха этой цели (пока что) должен быть человеком.

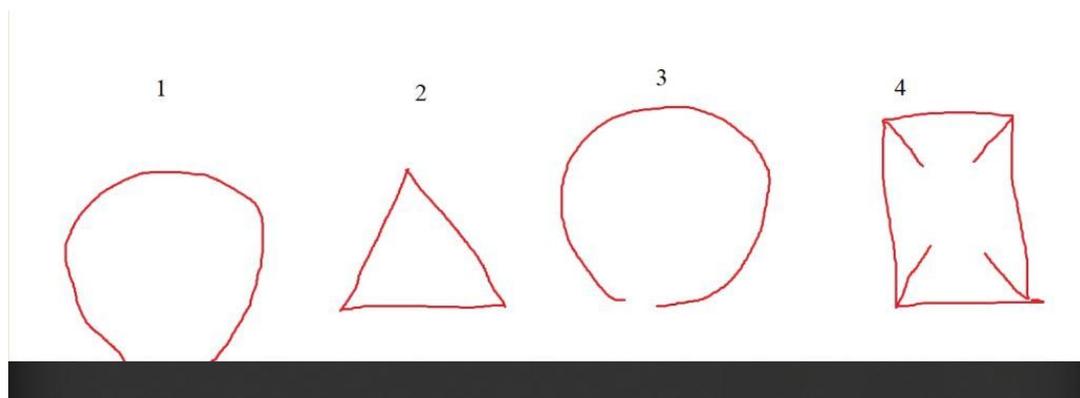
Компетенции в образовании (как и в бизнес-психологии) – это то, что непосредственно связывается с процедурой оценивания, ранжирования, идентификации и распределения, то есть предполагает стандартизацию принятия управленческих решений пусть и через посредство усложнённой системы квантификации. В системе образования, пока оцениваемые параметры на порядок сложнее возможностей оценивания, ещё остаётся место для относительной свободы и непроизводительности в самых лучших значениях этих слов, но усилия бюрократии в скором будущем могут окончательно победить и абсорбировать эти функции, квантифицировать и обезличить образование окончательно.

Формирование чего-либо предполагает в буквальном смысле придание актуальной формы некой потенциальности. Классический аристотелевский смысл раскрывается здесь так, будто у этого смысла вовсе нет постклассического контекста, суть которого, если сильно упростить, состоит в утверждении изначальной «не-заданности» человеческой сущности. Антропологическая ситуация состоит в принципиальной открытости человеческого бытия (Agamben, 2004). А в компетентностной парадигме смысл и назначение человека оказываются редуцированными зачастую к операциональному набору экономико-ориентированных практик. Такого рода редукция недопустима, так лишает человека его главного человеческого содержания и превращает его из цели в средство.

Этико-педагогической задачей философа как преподавателя философии является всемерное и последовательное развитие и сохранение человеческого содержания свободы, адекватности и опыта мира как места самосознающего бытия, а не территории корпораций производства и потребления. Современность, собственно, ставит эту задачу с беспрецедентной остротой. В этой связи и следует разрабатывать, совершенствовать и практиковать инновационные методы изучения философии, основными особенностями которых, между тем, должны быть принципиальная открытость, инновационность, творческий характер, широта проблематики и внутренней перспективы. Важно и то, что методология такого рода не должна быть догматичной. Сущность её в том, что она проводит через себя конкретный опыт мышления своего автора. Приёмы могут быть вполне традиционны, но важно, чтобы они были индивидуально проработаны и переосмыслены преподавателем, так как практика и техника мышления о мире – это то, что должно иметь для него личностный смысл (Shor & Freire, 1987).

Обратимся к некоторым примерам из преподавательского опыта. Данные примеры принципиально носят лишь выборочный общеориентационный характер. Иллюстрируют они следующие базовые принципы изучения философии: *проблематизация, вариативность, переосмысление*. Тактически любая конкретная учебная работа с проблемами в общем виде состоит в прохождении трёх этапов: 1) прояснение понятий, 2) логическое построение, 3) событие мышления. Базовые приёмы работы – это поиск, углублённое исследования, чтение, слушание, внимание, самообладание (Hadot, 2002). Приводятся задания, что принципиально, не ориентированные на специальные философские знания. Нам представляется, что задания должно просто и лаконично, например, на уровне визуального символизма ставить сложные задачи, спектр решений которых максимально широк и оценивается не результатом, а структурой и процессом решения (Duch, Groh, & Allen, 2001). Приведём примеры на основе визуальных образов.

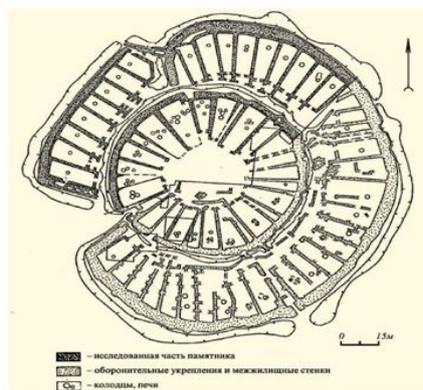
1. *Проведите опрос, какие из этих графических миров (Рис. 1) предпочитают ваши товарищи, задавая им вопрос «В каком из этих миров вы хотели бы жить» (можно принять пятый вариант в качестве рисунка аналогичного типа). Результаты исследования объясните со всей возможной полнотой.*



*Рисунок 1. Воображаемые графические миры*  
*Figure 1 Imaginary graphic worlds*

Схемы и их конфигурации в задании могут варьироваться сколько угодно, вместо схем могут быть предложены изображения предметов, музыкальные фрагменты, фактуры материалов, образцы запахов или сочетания этих рядов. Смысл задания многопланов: он направлен на проблематизацию образа мира, на осознание его целостности, вариативности, осмысление эмоциональных, дискурсивных и феноменологических аспектов его единства, на понимание связи между миропониманием и самопознанием. Понятия, предлагаемые для обоснования и обобщения ответов, в свою очередь могут быть подвергнуты обоснованию и обобщению. Задание предполагает, помимо этого, самостоятельный поиск методов обобщения и анализа материала.

2. *Порассуждайте о планах древних поселений (Рис. 2). Почему они были именно такими и что мы можем сказать о людях, которые в них жили, только на основе этой информации?*



*Рисунок 2. Планы поселений*  
*Figure 2 Settlements' plans*

Задание направлено на развитие воображения и внимания, на умение конструировать рассуждение на основе фактического материала и осмыслять технику этого конструирования. Мировоззренческие основы повседневности критически осмысляются через сопоставление и сравнение, осмысление экономических, антропологических, исторических аспектов в их взаимосвязи.

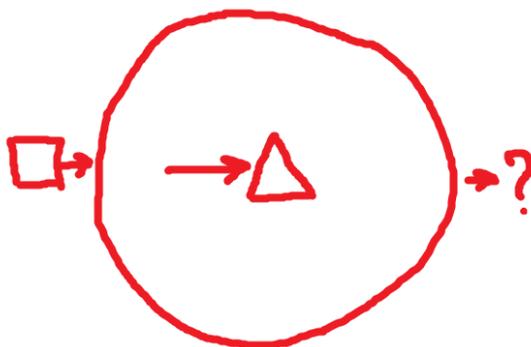
3. Найдите информацию об этом изображении (Рис. 3) и подготовьте развёрнутое рассуждение на её основе.



Рисунок 3. **Трубка** (<https://tcf.ua.edu/Classes/Jbutler/T311/Modernism.htm>)  
Figure 3 **Pipe** (<https://tcf.ua.edu/Classes/Jbutler/T311/Modernism.htm>)

В данном случае в качестве основы для размышления используется знаменитая картина Рене Магритта «Вероломство образов» (*La trahison des images*, 1928-1929, Музей искусств округа Лос-Анджелес). Картина уже становилась предметом образцовых философских штудий Мишеля Фуко, поспорить и посоревноваться с которыми предоставляется возможность. Задание предполагает самостоятельный поиск материала для истолкования и объяснения, задействуя спектр поисковых и эвристических навыков. Содержательно задание ставит проблемы знака, выразимости, восприятия и их отношения, но ими не ограничивается, позволяя рассуждать об искусстве, речи, воображении, коммуникации. Произведения современного искусства – изобразительные, перформативные, аудиальные, видео-арт – очень эффективно могут быть использованы как материал для развития философского мышления.

4. Предложите разные рассуждения, общая структура которых соответствует схеме (Рис. 4).



*Рисунок 4. Схема рассуждения*  
*Figure 4 The scheme of reasoning*

Схемы могут иметь любой произвольный вид, включать разнообразные цветовые решения, вариативные элементы. Мы склоняемся к простым и незамысловатым геометрическим формам в связи с их большей абстрактностью и, следовательно, большей свободой возможных интерпретаций. Схемы могут рисовать сами учащиеся для самих себя или друг для друга, а затем предлагать для них толкования. Рассуждения могут в принципе иметь произвольное содержание, но предпочтительней рекомендовать использование для их истолкования философского материала (терминологии, концепций и т.д.). Задание такого типа может быть использовано в качестве интеллектуальной разминки. Интересно сопоставлять друг с другом подготовленные учениками интерпретации.

5. *Порассуждайте о соотношении и взаимосвязи страха и смеха (Рис. 5). Подберите изображения, иллюстрирующие ваши рассуждения.*



*Рисунок 5. Смех и страх*  
*Figure 5 Laughter and fear*

Задания этого типа направлены на проблематизацию вещей и явлений повседневности, на переосмысление обыденного и стереотипного. Удивление перед сложностью и амбивалентной красотой повседневного мира – это базовое философское состояние, провоцирующее событие мышления. Стоит заметить, что как это, так и прочие задания многих ставят в тупик именно по причине защитной реакции на удивление. Удивление – это опасное состояние, на которое не каждый готов отважиться, так как оно предполагает беззащитность и неопределённость. Нужна осторожная, внимательная и кропотливая работа по выведению ученика из эмоционального и мыслительного стопора, по знакомству его с удивлением и его определяющим мыслительно- и жизнеустроительным потенциалом. Такая работа требует значительного уровня самоотдачи педагога и никаким образом не может быть формализована.

Приведём два примера заданий на основе более традиционной формы - работы с текстом.

- б. *Порассуждайте о смыслах греческого понятия (Рис. 6), их связи с современным значением, сформулируйте проблемные вопросы и предложите краткие варианты их решения.*

**κόσμος** ó 1) упорядоченность, порядок (κόσμῳ τίθε- ναι τὰ πάντα Нег.): οὐ κόσμῳ εἶρησθαι Нош. идти в беспорядке; οὐδενί κόσμῳ Нег., тьис., οὐδένα κόσμον Нег. **и** κατ' οὐδένα κόσμον ρήνι. без всякого порядка; 2) надлежащая мера, благопристойность: οὐδένα κόσμον ἐμίλι- λασθαι Нег. наедаться сверх всякой меры; οὐ κατὰ κόσμον εἰπόν Нот. сказав неучтиво; εἰρηκας ἀμφί κόσμον АевсБ. ты правильно сказал; 3) строение, устройство: κ. ἵπλου Нош. устройство (деревянного) коня; 4) *штэ*. κ. τῆς πολιτείας ΡШ. государственный строй, правовой порядок (ó олигарχικός κ. тьис.); 5) *фна Крите*) косм, носитель высшей государственной власти (**аы.**; **см.** κος- μέω б); 6) мировой порядок, мироздание, мир *зпервые названный так Пифагором как выражение высшего порядка*) (οὐκ αν ὁ κ. γίγνεται καί φθείροτο, ἀλλ' αἱ διαθέσεις αὐτοῦ ΑΓδί.; ἀπό καταβολῆς κόσμου NT); 7) небесный свод, небо (γῆ ὑπὸ τῷ κόσμῳ κεκλιμένη ἴδου.); 8) мир, свет, земля (γεννάσθαι εἰς τὸν κόσμον vt); ὁ ἀρχὸν τοῦ κόσμου τοῦτου vt = ὁ διάβολος; 9) *перен.* свет, люди, народ (ἐμφανίζειν ἑαυτὸν τῷ κόσμῳ NT); 10) украшение, наряд (πάντα περὶ χρωαί θήκατο κόσμον, **8С. Пρη** Нот.; γυναικεῖος Ρ1а1.); ἐπίχρῳσοι κόσμοι рш. позолоченные *или* блистающие золотом украшения; 11) *перен.* украшение, краса, честь, слава (σύ γάρ εμοιγε μέγιστος κ. εσει Хеп.); 12) прикраса (ἡ γλώσσα —ὁ κ. τῆς ἀδι- κίας vt).

*Рисунок 6. Значения слова (Vejsman, 1899)*

*Figure 6 Meaning of the word (Vejsman, 1899)*

Для работы с философскими понятиями важно осознание их происхождения, круга значений и их истории. Методы работы со словарными понятиями могут быть очень разнообразны. Вообще работа с разными языками, сопоставление и сравнение значений, осмысление сходств и различий, переводимости и непереводимости очень плодотворны. Представляется важным сам процесс знакомства с

понятиями иного языка, системой словарной статьи, ссылок и синонимических рядов. Этот процесс позволяет понять особое значение языка для мышления и мышления для языка.

7. *Предложите философские понятия для истолкования фрагмента (Рис. 7). Подумайте о связи фрагмента с философскими теориями познания. Понятия и идеи к обсуждению: память; образ мира; познание; жизненный мир; ощущение; восприятие.*

Кейс «Печенье и память»

*И как только я вновь ощутил вкус размоченного в липовом чае бисквита, которым меня угощала тетя... в то же мгновение старый серый дом фасадом на улицу, куда выходили окна тетиной комнаты, пристроился, как декорация, к флигельку окнами в сад, выстроенному за домом для моих родителей... А стоило появиться дому — и я уже видел городок, каким он был утром, днем, вечером, в любую погоду, площадь, куда меня водили перед завтраком, улицы, по которым я ходил, далекие прогулки в ясную погоду. <...> весь Комбре и его окрестности — всё, что имеет форму и обладает плотностью — выплыло из чашки чаю.*

Марсель Пруст. В сторону Свана. Из цикла романов «В поисках утраченного времени» / Пер. с фр. Н.М. Любимова

*Рисунок 6. Фрагмент литературного текста*  
*Figure 6 Fragment of literary text*

Использование глубоких и выразительных, небанальных фрагментов из литературных произведений или целостных небольших художественных текстов, например, поэтических, как показывает практика, имеет большое значение. Эта практика включает в себя мировоззренческую ориентацию, эмоциональный и дискурсивный планы в их единстве, что и в целом определяет направленность и смысл любого из приведённых примеров.

Комплексное использование такого рода методик и заданий у студентов направления «Экономика» на занятиях по философии в экспериментальной группе (ЭГ) в сопоставлении с результатами в контрольной группе (КГ) при равенстве прочих условий дали положительные результаты (Табл. 1). Как следует из таблицы, студенты в экспериментальных группах стабильно показывали лучшие средние значения баллов, чем студенты в контрольных группах. Стоит заметить, однако, что хотя контрольная работа как форма оценки результативности метода и не полностью релевантна поставленным целям, так как предполагает формализацию знания, но, между тем, общая мотивация позволяет улучшить и этот показатель.

*Таблица 1. Результаты исследования*  
*Table 1 Research results*

Учебный год	Средний балл за эссе (max=10)		Средний балл за контрольную работу (max=50)	
	КГ	ЭГ	КГ	ЭГ
2016/2107	7,3	8,0	37,7	42,2
2017/2018	7,4	7,9	38,1	41,7
2018/2019	6,6	8,1	36,5	43,1

### **Выводы** *Conclusions*

Базовым ориентиром для преподавателя философии должно быть развитие у учащихся любопытства, адекватности и творческой оригинальности мышления. Эта задача предполагает активизацию мышления через проблематизацию, вариативность, критичность и переосмысление. Принципом методики, ориентированной на эту задачу, является ориентация на актуализацию мышления, прежде всего, само педагога, его искренность и интеллектуальную самоотдачу. Практика применения заданий, предполагающих не запоминание и воспроизведение информации, а живое со-мышление с преподавателем и друг с другом, даёт стабильно более высокие результаты по формализованным критериям, чем традиционные формы работы.

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### **Summary**

The relevance of this work is determined by complex intersections in the practice of education and in modern social life in general. The methodology of teaching and studying philosophy requires a rather decisive revision in connection with the transformation of the anthropological model, which, despite its veiled nature, is a global problem. The objectives of this work are, firstly, the general analytical characteristics of current trends in the organization of higher education in relation, first of all, to the place of philosophy in it, and secondly, a preliminary description and pedagogical characteristics of some innovative methods of teaching philosophy from the experience of our own teaching practice. The teaching of

philosophy should not be dogmatic. The essence of the methodology of teaching philosophy is that it conducts the concrete thinking experience of its author through itself.

The examples cited in the article illustrate the following basic principles of studying philosophy: problematization, variability, and rethinking. Tactically, any specific educational work consists in going through three stages: 1) clarification of concepts, 2) logical construction, 3) an event of thinking. The basic methods of work are in-depth research, reading, listening, attention, self-control. The tasks are not focused on special philosophical knowledge. It seems to us that tasks should simply and concisely, for example, at the level of visual symbolism, pose complex tasks, the range of solutions of which is as wide as possible and is evaluated not by the result, but by the structure and process of solving. The work of the teacher of philosophy should be a public and dialogical work of the philosopher for understanding the present, but not a scholastic translation of the ideas of the past.

The complex use of this kind of techniques for students of the Economics direction during the period from 2016 to 2019 in philosophy classes in the experimental groups, in comparison with the results in the control groups, with other conditions being equal, yielded the following results: students in the experimental groups consistently showed better average results than students in control groups.

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## DEVELOPMENT OF SERVICE QUALITY FOR STUDY PROGRAMME 'THERAPEUTIC MASSAGE'

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**Abstract.** Higher education institutions try to provide best quality study and services in order to satisfied student. The purpose of this paper is to develop recommendations to improve service quality for study programme 'Therapeutic massage' (EQF study level 5). The standard questionnaire SERVQUAL (five dimensions - reliability, assurance, tangibles, empathy and responsiveness), emphasizing on measuring the gap between level of current and expected service quality was used. In total 122 students (94% of study programme`s students) have participated in research. The study examines the validity of SERVQUAL in assessing students` satisfaction with study programme. Reliability Coefficient Cronbach's Alpha 0.884. The research found that in the study programme there is a gap of current and expected service quality in dimensions empathy (gap mean score -0.28), tangibles (gap mean score -0.38), responsiveness (gap mean score -0.30) indicating that development need to be implemented to enhance the service quality. Based on the research results obtained, recommendations for improvement of service quality were developed.

**Keywords:** service quality, SERVQUAL, student satisfaction, study programme.

### Introduction

Students nowadays are self-rigorous, demanding and acknowledges the value of their time and resources for high service quality. Study programme and higher education institution might be easily changed if expectations will not be achieved. Yet in every country and in every higher education institution national licensing, accreditation have to be succeed as a mark of quality, nevertheless student's opinion and evaluation is the immediate signal of quality daily. The management of education institution have to observe, speak and listen to students regularly as equal members.

In the world in academic field current challenges related with student changing characteristics (like involvement, technology use, life skills etc.) (Miller, Pope, & Steinmann, 2005).

The purpose of this paper is to develop recommendations to improve service quality for study programme 'Therapeutic massage' (The European Qualifications Framework (EQF) study level 5). Length of study programme is 2 academic years, full-time studies, amount 120 European Credit Transfer and Accumulation System (ECTS). Total 28 educators are involved in education process. The research question - what actions have to be implemented to develop service quality for study programme 'Therapeutic massage'.

As instrument was used SERVQUAL questionnaire which was designed on the basis of Lickert's five scale and distributed among students in class. Results of SERVQUAL survey was analyzed and to develop recommendations or service quality improvements and incorporated into the strategy of the study programme 'Therapeutic massage', indicating performance indicators.

### **Importance of quality in education institutions**

Educational institutions are being required to develop their own approaches to quality, to improve quality and raise universities' responsibility and responsiveness. Institutional diversification, individualization of universities' and adoption of specific missions operationalized have to be part of development strategies (Pavel, 2012). Educational institutions are pursuing quality improvement for a number of important reasons. Some are linked with professional responsibility, while others result from the competition inherent in educational marketplaces or from the need to demonstrate accountability.

Authors (Willemse & Lunenberg, 2005; Arawi, 2002; Lovat & Toomey, 2009) like to discuss the complexity of education and the importance of values in education what makes the motives for taking a quality stance more complicated and diverse.

Student behaviour and teacher-student relationships are transforming improving the environment of learning, strengthening teacher and student resilience, and hence staff and student satisfaction (Lovat & Toomey, 2009).

E. Sallis (2002) have set four quality imperatives: the moral imperative (students, parents and the community deserve the best possible quality of education), the professional imperative (educators have a professional duty to improve the quality of education), the competitive imperative (competition requires strategies that clearly differentiate institutions from their competitors), the accountability imperative (schools and colleges are part of their communities and as such they must meet the political demands for education to be more accountable and publicly demonstrate the high standards (Sallis, 2002).

### **Service specific in education field**

No doubts service is specific in different fields so as in education field. In services, quality consists not only of the result, but also of the process. Even if the result is favorable (an academic degree), if the process is flawed, the quality is considered low since quality is meeting customer expectations in service characteristics. In services, the focus is on external customers, and their satisfaction with both the result and the process (Sharabi, 2013).

The traditional marketing tools historically grouped into 4Ps (product, price, place and promotion), 5Ps (adding people) and 7Ps (adding physical facilities and processes). Within the education context, it is proposed that marketing mix in category 5Ps people include academics, administrators, support staff and the students themselves. The physical evidence would of course be the materials, teaching facilities, accommodation, recreational facilities. the processes are those to facilitate applications, registration, exceptions, learning activities as well as social activities (Ivy, 2008). Service quality necessity in Higher education has been discussed from the specific viewpoint of students as consumers or customers (Douglas & Douglas, 2006; Bunce, Baird, & Jones, 2017). From education quality point of view other scholars argue that students are not customers (Wood, 2016).

New business models mean universities are increasingly taking a more business-like approach while attempting to meet and exceed the needs of students as clients. The core service of the university experience is embodied in the learning experience of the student. Students play two key roles in creating a service outcome i.e. as a productive resource, and as a contributor to quality, satisfaction and value. As a productive resource, students bring with them their intellect, language and communication skills. As a contributor to quality, satisfaction and value, students can choose the level of effort they wish to expend. Supplementary services such as application processes, payment of fees, campus facilities, staff helpfulness and student accommodation all play a role to facilitate the core service experience (Ng & Forbes, 2009).

Several researchers have used SERVQUAL model to assess service quality in educational institutions. Majority of authors who had used SERQUAL model found that students' expectations significantly exceeded their perceptions (Legčević, 2009; Yousapronpaiboon, 2014; Serban & Stoian, 2019; Karwati, Sukardi, & Syafruddin, 2018; Tan & Kek, 2004; Akhlaghi, Amini, & Akhlaghi, 2012).

For some authors only some dimensions showed significant difference between students' expectations and current level of quality (Abari, Yarmohammadian, & Esteki, 2011; Leonnard, 2018).

Some authors found at least one positive gap between five proposed and evaluated dimensions (Soares, Novaski, & Novaski, 2017; Milojević & Radosavljević, 2019; Jess, 2019).

Literature review show that for different higher education institutions different improvements have to be done.

For higher education institution in Thailand to improve the service delivery it needs to upgrade facilities and equipment in order to decrease the gap. (Yousapronpaiboon, 2014).

The results of case study what was carried out at the Slovenian business school by A. Faganel showed the most important quality dimension for students is to inform students timely about time and place of services provided. Students' second most important item is the regularity of informing students about the time and place of services provided. Their third most important quality dimension is the knowledge of employees to answer students' questions. Students stress the appearance of faculty building and surroundings as the least important quality dimension which gives less importance with low perceived quality (Faganel, 2010).

According to the findings (Akhlaghi, Amini, & Akhlaghi, 2012) authors suggest to recruit staff who understand the importance of services and have the attitude to provide students with effective resolutions on the first contact whenever possible, to reinforcing the staff capabilities through ongoing opportunities for training and development, requesting feedback from the students regularly using surveys or through representatives who have close interaction with students, the measurement and monitoring of complaints is vital, encouraging students to share their ideas and using their opinions in educational planning (Akhlaghi, Amini, & Akhlaghi, 2012).

### **The methodology**

The quantitative approach to the study was selected as appropriate research to investigate social phenomena using statistical techniques. First Descriptive statistics analysis was done in order to summarizing large databases and detecting patterns in the data in order to convey essence for further analysis using inferential statistics (Rovai, Baker, & Ponton, 2014). The study was conducted among students in higher education institution study programme 'Therapeutic massage' (EQF study level 5) in Latvia. Satisfaction measurement instrument SERVQUAL was used. Parasoraman, Zeithaml, & Berry (1985) initially identified 10 dimensions for the identification of service quality: facilities, reliability, responsibility, communication, credit, security, qualification, politeness, understanding of the client, and availability. Later, in a research in 1988 researchers summarized these into five dimensions:

Tangibles - The appearance of physical facilities, equipment, personnel, and communication materials. Reliability - The ability to perform the promised service dependably and accurately. Responsiveness - The willingness to help customers and provide prompt service. Assurance - The knowledge and courtesy of employees and their ability to convey trust and confidence. Empathy - The caring, individualized attention the firm provides its customers.

A positive gap score implied that expectations have been met or exceeded, service quality is perceived to be satisfied. A negative gap score implied that expectations have not being met, quality is perceived to be unsatisfactory (Parasuraman, Zeithaml, & Berry, 1988).

Based on the abovementioned literature reviews from June to July 2019, a SERVQUAL scale for student satisfaction was developed. Questionnaire consisted with 28 items listed in 5 dimensions according SERVQUAL model. In 5 point Likert scale (for expactation "5" very important; "1" not at all important, for perception "5" excellent and for "1" very weak) students had to mark how important was their expectations and what are their current perception regarding services received.

The questionnaire was pre-tested in August-September with higher education institution`s staff and the validity and reliability of the questionnaire were analyzed. In October, the questionnaires were submitted to the research institution`s Ethics Committee for consideration and subsequently approved (10/10/2019., Nr.30).

Data were collected in class distributing questionnaires among students (November). During process of distributing questionnaires researcher participated so to provide full explanation about questionnaire and items so to ensure correct interpretation. The undergraduate students were assured that their responses would be kept confidential.

Quantitative data analysis software Ms Excel 2016 was applied for data processing. The reliability of the SERVQUAL scores was evaluated by computing Cronbach's Alpha coefficients. The Cronbach's Alpha helps to determine the reliability as it measures the internal consistency of a set of items comprising a scale. The closer the Cronbach's Alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale will be (Olaniyi, 2019).

Based on the research results obtained, recommendations for improvement of service quality were developed.

## **Research results**

Descriptive statistics analysis is made to describe quantitative data regarding student demographic profile and gap analysis according to SERVQUAL model. Reliability Coefficient of SERVQUAL model Cronbach's Alpha 0.884. The study

was conducted among 122 students (94% of study programme's students). The results are statistically significant. 94 females and 28 males participated in the research. 20.1% were in age category from 21-30 years old, 14.8% were in age category 31-40 years old, 8.6 % were in age category 41+. 72 students were in 1<sup>st</sup> study year, 50 students were in 2<sup>nd</sup> study year. For 30 respondents from 122 this study programme is their 1st qualification. Almost the same amount of respondents (32) mentioned that they are studying 'Therapeutic massage' because they want to change their current profession. 48 respondents admit that studies are new challenges for them, self-growth. Perceptions and Expectations couples everywhere statistically different ( $p < 0.05$ ). Descriptive statistics are given from table 1.

The results show that differences in perception and expectation across all 28 items and five dimensions are statistically significant ( $p < 0.001$ ). In addition, the difference between overall average perception and expectations is statistically significant. Therefore, it can be concluded that there is a gap between the perception of the students of the study program and the quality of service.

Study programme 'Therapeutic massage' Students stress items *Opportunity to participate in the Students' Council, Erasmus + internship and to prove yourself in competitions, Olympics, etc. Extra-curriculum activities* related to the study

Table 1 Mean scores of dimensions of service quality

Dimensions and Items	Expectations		Perceptions (current level)		Mean Gap Score	Gap 1st study year	Gap 2nd study year
	Mean	SD	Mean	SD	(P-E)*	(P-E)	(P-E)
<b>Empathy</b>	4.36	0.67	4.08	0.63	<b>-0.30</b>		
Individualized attention to every student	3.85	0.81	3.89	0.59	<b>0.03</b>	-0.17	0.32
Convenient education's place	4.32	0.67	4.18	0.59	<b>-0.13</b>	0.01	-0.36
The lecturers' interest in and readiness to satisfy students' justified wishes	4.41	0.65	4.07	0.52	<b>-0.33</b>	-0.32	-0.36
Convenient time for receiving education services	4.49	0.56	4.11	0.60	<b>-0.38</b>	-0.25	-0.58
Possibility to combine studies with paid work	4.72	0.66	4.17	0.83	<b>-0.54</b>	-0.69	-0.34
<b>Assurance</b>	4.28	0.74	4.20	0.57	<b>-0.09</b>		
Business like environment of lectures and practical classes	3.82	0.81	4.07	0.53	<b>0.24</b>	0.03	0.56
Faculty members with a long experience of working with students	4.22	0.86	4.24	0.56	<b>0.01</b>	-0.21	0.34
The attitude of faculty members - behavior, speech, appearance	4.17	0.86	4.16	0.55	<b>-0.01</b>	-0.25	0.32
In case of uncertainty - support from any employee	4.39	0.70	4.17	0.63	<b>-0.22</b>	-0.39	0.02
All level of staff attitude towards students	4.52	0.59	4.26	0.57	<b>-0.26</b>	-0.36	-0.12
Faculty members - industry practitioners	4.58	0.64	4.31	0.56	<b>-0.27</b>	-0.40	-0.08
<b>Responsiveness</b>	4.23	0.65	3.92	0.63	<b>-0.30</b>		
Opportunities to prove yourself in competitions, Olympics, etc. extra-curriculum activities related to the study process	3.09	0.93	3.80	0.61	<b>0.71</b>	0.60	0.88

Faculty members` flexibility regarding students' justified expectations	4.31	0.66	4.07	0.48	<b>-0.24</b>	-0.24	-0.26
Faculty members availability for individual consultations	4.37	0.61	4.07	0.70	<b>-0.3</b>	-0.31	-0.30
Topicality of the content of lectures and practical classes	4.70	0.51	3.88	0.55	<b>-0.81</b>	-0.92	-0.68
Prompt provision of information on changes to the course / program schedule	4.67	0.54	3.79	0.79	<b>-0.88</b>	-1.02	-0.68
<b>Reliability</b>	3.94	0.75	4.06	0.64	<b>0.12</b>		
Opportunity to participate in Erasmus + internship	3.16	0.95	3.96	0.73	<b>0.8</b>	0.70	0.94
Opportunity to participate in the Students' Council	2.48	0.91	4.01	0.62	<b>1.52</b>	1.34	1.78
Accreditation of the study program at the national level	4.48	0.68	4.26	0.64	<b>-0.22</b>	-0.10	-0.4
Provision of practice place during studies	4.53	0.68	4.14	0.70	<b>-0.39</b>	-0.29	-0.54
Provision of accurate document certifying the acquisition of the study programme	4.56	0.60	4.10	0.62	<b>-0.45</b>	-0.32	-0.66
Providing regular feedback to students on the results of the tests by the lecturer	4.45	0.66	3.91	0.55	<b>-0.54</b>	-0.53	-0.56
<b>Tangibles</b>	4.12	0.80	3.74	0.84	<b>-0.38</b>		
Individual study workstations with adequate lighting, internet access and electrical charging options	3.62	0.88	3.81	0.76	<b>0.18</b>	0.38	-0.08
Integration of modern teaching methods (audio-lectures, use of mobile/digital applications) into the study environment	4.42	0.76	4.32	0.71	<b>-0.09</b>	-0.18	0.02
Access to libraries and electronic databases	4.41	0.71	4.26	0.63	<b>-0.14</b>	-0.28	0.04
Ergonomics of lectures/ practical training rooms	4.27	0.72	3.56	0.87	<b>-0.71</b>	-0.55	-0.94
Availability of catering services	3.43	1.08	2.66	1.29	<b>-0.76</b>	-1.24	-0.08
Easy to understand content, volume, format of methodological / handout materials	4.58	0.67	3.81	0.80	<b>-0.77</b>	-0.72	-0.84

\*(P-E) this means Perceptions – Expectations = Gap

process as the least important quality dimension which gives less importance with low perceived quality.

The biggest difference in quality of service is in dimensions *Responsiveness* regarding *Prompt provision of information on changes to the course / program schedule* (average negative gap is (-0.88)) and *Topicality of the content of lectures and practical classes* (-0.81). Therefore, it is necessary to make the communication network more efficient. In order to prevent late transmission of lecture schedule changes to students, it is suggested to implement a mobile application *WhatsApp* group account. E-mail so far, as well as the elder of the course, were not always able to convey messages effectively to others.

Content of lectures and practical classes is possible to change every year in the content of the study program during the approved accreditation period of the study programme do not exceed 20% of total credit points in programme (Regulations of opening and accreditation of study directions, 2019). It is based on trends in the sector, suggestions from employers, changes in technology, and wishes expressed in student regular questionnaires. Opportunity-based changes are incorporated into next year's program as far as possible. Students' questionnaires will serve as a monitoring tool. Questions as - the speed of

information on changes in lecture schedules and satisfaction with the curriculum content.

In study programme's strategy are set performance indicators to minimize gap for item *Easy to understand content, volume, format of methodological / handout materials* (-0.77). Out of all study courses in 95% study courses methodological materials have to be uploaded and available in student e-learning site Moodle. Educators will be encouraged to upload methodological materials available before lectures, so that students can familiarize themselves with them before the lecture.

Regarding- *Providing regular feedback to students on the results of the tests by the lecturer* (-0.54) - educators constant have to be reminded the importance of feedbacks both for mid term grade and final tests grade. In study programme's strategy is set performance indicator: firstly, 19 out of 28 educators regularly prepare knowledge self-control tests in study system Moodle so students can immediately after filling the test see the correct and wrong answer (which is perfect tool to provide immediate feedback). Secondly 9 out of 28 educators regularly practice mobile application tool (like *mentimetr, kahoot.it direct poll* etc.) to provide for students short and quick self control tests. Thirdly student questionnaires will be added with *do educators provide regular feedback*.

Availability of *catering services* (-0.76) what is very important for 1st study course students and *Ergonomics of lectures/practical training rooms* (-0.71) what 2nd study course student require more are rather important, so possible solution will be discussed at a College development meeting.

## Discussion

Based on the research results obtained it can be concluded that student profile is diverse because of age and previous experience, what might causes different student expectations about study programme. There is a gap between expectations and the quality of the services received in the study programme 'Therapeutic massage'. In addition, SERVQUAL is a reliable tool (Cronbach's Alphas is 0.884) for evaluating the quality of services in the study programme. The results are similar to a study conducted by author A. Faganel (2010) at the Slovenian Business School. A.Faganel states that most important aspect for students is the provision of information on changes to the course/programme plan on the part of employees - 0.88, which is the Responsiveness dimension.

Comparing the results with researcher K. Yousapronpaiboon (2014) results in Thailand, it can be concluded that students in Study programme 'Therapeutic massage' is more satisfied with the quality of the services, the lowest Gap - 0.88 vs. the lowest Gap of Thailand -2.88. This is because the quality of studies is constantly assessed, but according to Sharabi (2013) even if the result is

favorable (an academic degree), if the process is flawed, the quality is considered low since quality is meeting customer expectations in service characteristics.

Consequently, to improve service delivery and decrease the gap between undergraduate students' perceptions and expectations, for the institution in Latvia it need to be upgraded facilities and equipment, developed availability of catering services and ergonomics of lectures/practical training rooms.

It is imperative for higher education institutions to understand the various dimensions of service quality and the need of continuous improvement in service quality for achieving sustainable development. Satisfaction with higher education services will be annually monitored. The recommendations developed in this study have been incorporated into the strategy of the study programme 'Therapeutic massage', indicating performance indicators.

For further research promoting and coordinating quality of services could serve as a perspective for other study programmes within the same higher education institution.

Further studies could be carried out by means of a quantitative (SERVQUAL questionnaire) and qualitative research approach (focus group discussion), since mixed methods research is a pragmatic research approach. To the mixed methods researchers, a combination of qualitative and quantitative methods provides a better research approach than either in isolation (Rovai, Baker, & Ponton, 2013).

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# PRACTICE AND PERSPECTIVES OF IMPLEMENTATION OF LAW STUDY COURSES IN FACULTIES OF LAW IN UNIVERSITIES OF APPLIED SCIENCES

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**Abstract.** *The dynamism of social processes, the continuous development of elements of the legal system, including innovations within the legal framework, the ongoing reform of law enforcement institutions and bodies, diversity of national and international legal practices, transformation of legal culture forms, including its deformations, define the need for developing of qualitative law study programmes (Bachelor, Master, PhD). Legal professionals need regularly to improve their legal knowledge and to ensure successive professional development. The qualitative implementation practice of study courses of law science and the prospects of their implementation are one of the key elements for the development of a democratic, legal and socially responsible state.*

*Research aim: to identify the current practice of implementation of law science curricula and of study courses by modelling their potential development trends according to perspective social-economic development of society.*

*Research methods: research of legal sources and literature, the Internet resources, modelling approach.*

**Keywords:** *legal education, study courses, curricula, law science.*

## Introduction

Social life is becoming more and more rapid and intense, and social, political, financial, economic, legal and other situations (environmental conditions) are becoming more diverse and controversial. The dynamic and contradictory development of the environment requires from the individuals involved in communicative processes to gain and have high level knowledge, skills, abilities and competences. Continuous promotion and development of the corresponding qualities are of particular importance. In this context, the importance of the education system and its successive, sustainable development is growing. The education system is very broad in scope and comprehensive. The authors of this article do not aim to delve into the entire spectrum of its overall

development. Legal education is an important area of the development of society and the education system. The practical aspect of legal education is that special attention is paid to the development of legal skills in the study process, involving students in solving weddings, wider use of practical classes, organization of court games.

The dynamism of social processes, the continuous development of elements of the legal system, including innovations within the legal framework, the ongoing reform of law enforcement institutions and bodies, diversity of national and international legal practices, transformation of legal culture forms, including its deformations, define the need for developing of qualitative law study programmes. In addition, legal professionals need regularly to improve their legal knowledge and to ensure successive professional development. In every society, lawyers are expected to be able to respond quickly to changing conditions of life, which one can apply to all spheres of public life. The President of Latvia, Egils Levits has emphasized that lawyers are responsible for the legal system of Latvia. In addition, teaching staff of the faculty also strengthens Latvia as a legal state by performing academic work and educating young lawyers. The President reminded that the profession of a lawyer, unlike many others, demands personal loyalty to the state because the rights and the law are intrinsically linked to political ideas (Gailīte, 2019).

The qualification of a lawyer covers a very wide range of areas in which to specialize and realize a human potential. From the ages of ancient Rome to the present, the profession of a lawyer has been respectable and special. This profession is one of the most prestigious specialties which is still popular among prospective students. A profession of a lawyer is alive and the size is subject to change (What is the future of legal education in Latvia.). There is an opinion to be supported that it is not justified to distinguish between professional and academic qualification in law science because basic issues a lawyer-professional and „clean” science are dealing with cannot completely be distinguished too. The labour market requires lawyers with good theoretical knowledge and skill to apply this knowledge in practice. Law science needs scientists who develop the theoretical basis by understanding and taking into account the empirical regularities.

The aim of the article is to identify the current practice of implementation of law science curricula and of study courses by modelling their potential development trends according to perspective social-economic development of society. To achieve the aim set the most important objectives are to describe the role of a lawyer in public processes and to highlight current events of implementation of legal education in Latvia. It is rightly highlighted in the legal literature that any of the most precise and sophisticated means will not provide the expected result if they are put at the disposal of an unprepared person

(Statkus, 2000).

Legal acts and scientific literature are used in the article. In the development stage of the article the analytical scientific method, as well as the methods for interpreting of legal norms such as grammatical, historical, systemic and theological are used. To draw conclusions there is both inductive and deductive research method used.

### **Mission of a lawyer for benefits of society**

The term „law science” is equal to the term „jurisprudence” (from Latin *ius, iuris* „law”+ *prudentia* „wisdom”). Law science or legal science is a branch of science that studies the regulation of public relations by law, as well as the procedures for the execution of rights and the fulfilment of obligations to improve the functioning of the mechanism of state authority and administration, the protection of the economic and social interests of natural and legal persons and to prevent criminal offences and other infringements of rights (Torgāns, 2019).

Law as a regulator of social life determines the pattern of behaviour acceptable to society. The famous US lawyer Roscoe Pound has defined the profession of a lawyer as a pool of educated persons serving for the needs of society. This job is also a source of daily bread. However, the use of knowledge and skills for the interests of society is the main task of the profession (Pound, 1953). Rightly to point out that the ethical conditions of the legal profession should promote the ideals of democracy, justice and the rule of law in society (Kūtris, 2010).

In the course of the development of humanity, rights have been branched into: public law (constitutional, administrative, financial, criminal) and private (civil, labour, commercial, intellectual property, etc.). The Latvian Council of Science has defined seven areas in which doctoral theses, scientific project can be developed, international symposia, conferences, seminars etc. can be organized—civil law, criminal law, national law, international law, forensics and theory of operational activities, police law, law theory and history.

The impact of globalization is more and more felt in the development of multicultural societies. There is not only a sufficiently free movement of people, goods, capital and services across borders, but also the availability of a single educational area and the use of educational resources. Despite the diversity of national legal frameworks and legal practices, international institutions are seeking to create a single legal environment. Not only universal human and multicultural values are getting increasingly similar and more acceptable in the face of globalization, but also legal norms and the process of their implementation are getting verified. In this respect, the challenge of the globalization of legal education is becoming of importance. Lawyers with a variety of academic

biographies have to provide increasingly demanding and high-quality legal services and legal assistance in different countries and regions. National legal education models need to include prospective lawyers in a transnational environment.

The qualitative development and application of legal norms is one of the most important aspects that develop public confidence in rights, public administration and the courts. Therefore, it is very important to provide adequate legal education to prepare lawyers who will give the public confidence in the courts (Medina & Salinieka, 2020). In a flexible response to trends in society Rīga Stradiņš University is developing study courses on human security and safety, conflictology, the use of electronic means of communication and databases. The specialization of RSU Law Faculty is unique, nowhere else in Latvia there are medical and social rights, for which the historical profile of the university – medicine – provides the best preconditions for studies. Since academic year 2010/11 RSU has been implementing programmes and curricula that replace the studies of the closed Latvian Police academy. Students are offered to specialize in police law at all the levels of study programmes, including in them forensics, methods of personal enquiry, methods of operational enquiry (RSU Juridiskā fakultāte).

### **Future of legal education in Latvia**

A profession of a lawyer involves both providing legal assistance to others in protecting their rights and holding positions of national importance (including judges, prosecutors), so it is important that the requirements for obtaining a lawyer qualification are sufficiently high and their enforcement is controlled and monitored (Medina & Salinieka, 2020). The report of the Ministry of Justice from November 10, 2015, entitled “On introduction of state unified lawyer qualification examination” determined a change of the legal system and a new approach to the quality control in education. One of the prerequisites for the introduction of a unified lawyer qualification examination was the termination of the professional qualification of a lawyer.

On April 20, 2017 the Saeima adopted the amendments to the Law of Higher Education Institutions, which provides that the Cabinet may determine that a part of the state examination in certain second level higher vocational education study programmes is a State exam (Article 58, Paragraph 4, Law of Higher Education Institutions). In accordance with the provisions of the Cabinet Regulations No. 46 of 15 January 2019 “On State Unified Lawyer Professional Qualification Examination Procedure” it is intended to introduce a state unified lawyer qualification examination from the spring semester of 2021. The rules and regulations are designed and implemented with the aim to addressing the

shortcomings identified when starting work on the state unified lawyer professional qualification examination. The rules and regulations, as well as the annotation added, do not contain a list of shortcomings, which may have been identified in the legal education process, and their analysis. Such shortcomings as in any educational system can be identified. It is essential to recognize that it is objectively difficult to assess whether a state unified lawyer qualification examination will help to achieve a goal, to address undetected gaps, and to improve the quality of legal education. The methodology for determining the quality of legal knowledge and skills could not be linked only to the Cabinet regulations. At the same time, it should be acknowledged that public administration institutions do not have criteria and methods to establish the level of legal knowledge and skills. This applies not only to graduates of law science study programs of higher education institutions, but also to legal practitioners.

The qualification examination should be passed in higher education institutions, which implement professional master's study programme to acquire a lawyer's professional qualification.

Paragraph 24 of these Regulations provides that in the qualification examination the student's knowledge and skills are examined in the following fields:

1. criminal law and criminal procedure law;
2. civil law, civil procedure law and commercial law;
3. constitutional law, administrative law and administrative procedure law;
4. international and European Union law;
5. theory of law, philosophy of law and history of Latvian law.

Paragraph 25 of the Regulations provides that the qualification examination shall be organized in the following parts:

1. the theoretical part, where detailed answers to 15 questions in writing are provided (each of the field referred to in Paragraph 24 of this Regulations contains three questions);
2. Practical part, where five practical tasks (cases) in writing are solved (there is one task (case) in each of the fields referred to in Paragraph 24 of these Regulations).

Among other things, the course and progress of the introduction of the state unified lawyer qualification examination provides that during the spring session of 2020, the University of Latvia shall ensure the possibility of passing an examination in the form of a pilot project.

On the basis of the research materials in Latvia it is concluded that, according to the students' opinion, the most effective form of knowledge acquisition is lectures by lecturers, followed by practical classes, finally – students' own-initiative work and preparation of course papers and reports. Students have

recognized that participation in scientific conferences the most inefficient form (Mašošins, 2019). On the other hand, cross-border experience shows that studying outside Latvia has its own peculiarities, as there are no lectures, but there are workshops and group work. For example, when comparing the training/education process in Latvia and the US, it is appropriate to mention the socratic method. This method is comparable to workshops in Latvia, but with the difference that it is every lesson. For example, students should read 30-60 pages each time regularly to discuss in the class. US students have the opportunity to help professors write books and articles, as well as there is a number of other extracurricular activities (Kakstāns, 2018). In supporting the view that it is not possible to remain confined in sub-disciplinary fields today. The labour market is still open to professional and knowledgeable lawyers who know not only Latvian, but also international legal norms and regulations. A competent lawyer will always be appreciated in both public authorities and enterprises, and municipal authorities. It should be accepted that education is no longer a material category today, but a form of experience (Teorija pokolenij). Accordingly, it should be pointed out that students should be oriented towards interdisciplinarity.

Continuous professional development and ensuring the lifelong learning and study process of lawyers after the acquisition of bachelor's or master's study programmes is insufficient. Increasing legal professional skills, at best, takes place in a self-taught way that does not ensure the high quality of the necessary knowledge and skills to be acquired. Lifelong or further education in the legal education system in Latvia is not fully provided and an appropriate system is not developed in the country at a level that would correspond to the size of the legal requirements. In Education Development Guideline 2014-2020 it is recognized that there is the need to develop an education system for sustainable development: education that contributes to the ability of each individual to acquire the knowledge, values and skills needed for participation in decision-making on individual or collective actions at local and global level, in order to improve the quality of life at present without creating a threat to the needs of future generations.

Raising legal qualification may include the following interrelated segments: (a) acquisition of new regulatory frameworks and legal practices; (b) the absorption of changes, amendments and additions to the existing legal frameworks; (c) mastering and using of new information technologies and training platforms for continuing education and professional development. It should be acknowledged that around 80 directives and 1 200 regulations are approved per year in the European Union.

In the context of legal lifelong learning/studies, so-called clinical legal education plays an interesting role. This type of training is rather specific and is not used sufficiently in legal education system of Latvia. Clinical legal education

is a methodology for teaching in legal training institutions where students under the management of lecturers and legal practitioners represent the interests of real customers. Clinical legal education helps students to acquire knowledge of law science in practice. At the same time, students actually provide legal aid to the socially unsecured groups of society. This method is binding on the fact that it helps not only a student actively acquire legal knowledge, to address a customer's legal challenges, but also to improve their professional skills, to develop communication skills, to engage creatively in problems and challenges, to discuss and to organize students' work.

### **Key perspective approaches to improving and developing of legal education system**

Transformation of educational environment. The implementation of these directions is linked to the fact that educational institutions, including faculties of law, must be organizationally and content-oriented in order to facilitate new innovative approaches and exchange of new ideas. One of the aspects is the readiness of the education system to adopt new teaching methods, including the use of simulation tools. One of the possible solutions is the creation of a flexible educational environment, where it will be a place for the beginning of creative activity.

The legal environment and its various forms and situations are dynamic. The standardized approach is not always rational in their perception, problem solving and gaining new knowledge. The educational environment and the acquisition of new knowledge and skills can increasingly be developed not only in educational institutions, but also outside them. One of the examples we have already touched on is the establishment of legal clinics and their functioning. The activities of educational institutions should focus on the development of a comprehensive student's personality. To manage this, it is necessary to set clear aims and objectives, establish the necessary organizational support structures, provide training for teachers in the field of digital technologies, review student evaluation systems. It is doubtless that educational institutions would need to radically review the curricula, focus on transferring deeper theoretical knowledge to students, as well as paying a lot of attention to practice using modern technologies.

New technologies are one of the key elements of the transformation of educational environment. To feel free in the digital world, it is not only enough to have an opportunity to use technology. But the technological and digital opportunities are not enough in the world to be able to use technology, it is important to understand how we can use technology to improve our lives, increase professional capacity and work effectively. Universities need to develop a deeper

understanding of the digital environment, the ability to adapt intuitively to new conditions and create new content.

The effectiveness of online learning, as well as mobile and blended learning is not a question. Online education is the biggest challenge in higher education. Though universities compete for every student, educational platforms yield millions of students. For example, only Udemmy platform offers 100,000 online video courses with new additions and updates being published each month (Udemmy).

Online courses allow students to choose what they want and gain knowledge in a short period of time anywhere, at less cost. Online training provides a sense of freedom and control over its development process, which is one of the main drivers of obtaining the desired result. The presence of such advanced technological solutions, for example, online education, blended and mobile learning at the university, is a key factor of the success of legal education. At the same time, it is necessary to monitor and control the impact of education technologies on learning outcomes.

The development of modern law science and its inclusion in a legal education system not only determines the use of forms, new technologies, but also the creation of innovative study courses and the development of their content. Such study courses as Legal programming, the Rights of technologies, E-commerce legal regulations, the Digital environment legal framework, Digital litigation (digital process), Human Rights in the digital environment, etc. should be included in the new legal professional standard. For example, Harvard university offers a sufficiently extensive courses of innovative studies, including specialized computer science courses for lawyers (Harvard University).

Using technical instructions and discussions about case studies, this course gives students the opportunity to be informed about technology-driven processes. The course enables students to formulate legal arguments and opinions based on technologies. In parallel, it provides students with practical experience with Python and SQL-languages that give them data to get answers. Topics of the course include the development of algorithms, cloud computing, databases, networking, privacy, programming, security, and many others, with particular emphasis on how developers and the technological solutions they use work that can affect customers. This course at Harvard University is an introduction to computer science. This course is also implemented online as a series of video modules that can be accessed by your own schedule. No prior programming experience is required (The Learning Model).

The development and application of methodologies for the assessment of skills in processes at individual level are essential. Educational institutions must change by increasing their flexibility in line with labour market requirements. Individualization of education is an integral part of this process. The first step is

to create a personalized evaluation of learning outcomes. This gives a clearer picture of what students need to know to acquire certain skills and competencies. The most demanding future skills will be students' professional, creative and critical thinking skills. The priority of higher education institutions is the development of criteria for assessing such skills.

At present, there is already a number of successful projects in the world practice in the field of assessment of skills at individual level.

It must be acknowledged that in the context of globalization cooperation is as one of the key factors in ensuring effective solutions, including the field of legal education. One of the main features of modern universities is their ability to cooperate on the world market. The massiveness of higher education and a customer-oriented character led to serious competition between universities, and the globalization of education became the basis for building strategic alliances among several universities from different countries. It is becoming increasingly possible to identify the development of cooperation between education institutions by creating alliances that help to gain favourable positions in the global market for education services.

International cooperation and internationalisation of study processes play an important role in the legal education system, including the context of global law. Such an approach provides opportunities to learn and use the experience of other countries in this field of education, to jointly carry out global theoretical or practical applied researches or to develop projects of public interest, to significantly enrich the organizational, informative, methodological and technological basis of the study process etc. Internationalisation within the legal education system is multi-faceted and includes: mobility and flexibility of the education system, which involves the exchange of students and teachers within international programs; adjusting the standards of legal education in line with the dynamics of socio-economic and political processes and with the standards of legal qualifications in the European Union; regular consultation on methods of teaching in other countries, methodological and study materials; exploring possibilities for their use in Latvian legal education institutions (faculties); involvement of leading researchers and lecturers from other countries in the legal education system and its improvement; development of joint scientific projects and organisation of international symposia, conferences and seminars, etc.

## **Conclusions**

1. The legal education system, its content, forms, methods and technologies, to some extent, lags behind the dynamism and mobility of socio-political and economic processes.

2. A profession of a lawyer, as a socially important mission, without changing its spirit and substance is gaining a new content of the dominance of values of justice and democracy in today's world.
3. In times of globalization, despite the diversity of national legal frameworks and legal practices, a single transnational legal environment and a common legal education system are objectively being formed.
4. In order to ensure higher quality of legal education, a state unified lawyer qualification examination, which does not yet provide an unambiguous answer or the professional quality of lawyers will indeed increase as a result of the implementation of examination mentioned, has been introduced in Latvia.
5. Not only the provision of basic education (Bachelor, Master, PhD programmes) is important in the legal education system, but also the further education and professional development and lifelong learning of lawyers.
6. A high-quality legal education system is linked to the development of the necessary material basis, as well as the provision of highly qualified teaching staff, development of a study environment.
7. The use of new technologies, the simulation-based learning process, the wider use of technological platforms, is becoming increasingly important in the legal education system.
8. The development of modern law science and its incorporation into the legal education system requires not only the use of new technologies, but also the development of innovative study courses and their content (eg legal programming, robotics law, digital legal framework, etc.).
9. The involvement of Latvian legal scholars in the Association of European Law Faculties, which includes the involvement of lecturers and students in international legal research, and the continuous updating of legal study materials in the studies, should be encouraged.
10. The authors believe that today's current need is providing maximal activity of students in lessons, dictated by legal practice and an up-to-date procedure of acquiring the study courses.

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# МОДЕЛЬ «ПОГРУЖЕНИЯ» СТУДЕНТОВ В ИННОВАЦИОННУЮ ПРОФЕССИОНАЛЬНУЮ ДЕЯТЕЛЬНОСТЬ

## *Model of Students' «Immersion» in Innovative Professional Activity*

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**Abstract.** *The main objective of this paper is to present the authors' experience in preparing students doing the Primary Education course to implementation of innovative educational technologies in their professional activity. The article describes model of learning activity organization for students (future teachers) aimed to prepare them for innovative professional activity. This model was developed by the authors. It includes a number of stages: informative-motivational, operational, predictive, organizational and reflective. In this order the students pass the stages, i.e. get deeper understanding of innovative educational technologies applied in modern school lower grades. Each stage of the model uses educational strategies that help students to prepare to innovative activities: "intellectual and developmental teaching", "Being within content" strategy, "simulation", etc. Implementation of this model in Pskov State University proved its efficiency. Students that took part in the experiment showed positive dynamics in developing all components of readiness to innovative activity. The article pays special attention to the practical aspect of students' readiness.*

**Keywords:** *innovative educational technologies, readiness to innovative activity, students training.*

### **Введение**

#### ***Introduction***

Готовность к изменениям, нововведениям в профессиональной деятельности – одно из ведущих квалификационных требований к современному учителю. Новый импульс проблема приобрела в связи с реализацией идей Национального проекта Российской Федерации (РФ) «Образование», в частности подпроекта «Учитель будущего», предусматривающего разработку национальной системы профессионального роста педагогов, готовность которых к инновациям

будет являться важнейшей ее составляющей (Pasport nacional'nogo proekta "Obrazovanie", 2018). Сегодня в России широко обсуждается проект профессионального стандарта учителя, предусматривающий так называемую горизонтальную карьеру педагога: учитель – старший учитель – ведущий учитель. Необходимость подготовки педагога к инновационной деятельности прослеживается в документе по всем должностям от умения выбирать и применять современные образовательные технологии и методики обучения до способности использовать инновационные формы и методы организации учебно-исследовательской и проектной деятельности обучающихся, а также выявлять и описывать инновационные методики и технологии, лучшие практики профессиональной деятельности педагогов. В то же время наши наблюдения, исследования студентов в период педагогических практик, беседы с учителями показывают значительные затруднения, которые педагоги испытывают при необходимости использования инновационных технологий в обучении младших школьников. Возникает противоречие между возрастающими требованиями к уровню профессиональной подготовки учителя, и научной разработанностью технологий организации и использования инновационного обучения в современных условиях подготовки педагогов.

В статье обосновывается необходимость целенаправленного развития у студентов - будущих учителей начальных классов, готовности к инновационной профессиональной деятельности вследствие недостаточной сформированности компонентов этой готовности в рамках бакалавриата по направлению «Педагогическое образование».

### **Теоретическая основа темы** *The theoretical background*

Проблема готовности учителя к инновационной деятельности сегодня широко изучается. Большинство работ исследуемой нами тематики посвящены теоретическим основам новаций в образовательном процессе в целом, а также диагностике и путям повышения квалификации работающего учителя в системе методической работы и непрерывного образования. Это труды Э. Зеера (Zeer, 2010), Н. Ильиной (Il'ina, 2012), М. Кларина (Klarin, 1995), В. Лазарева (Lazarev, 2003), Б. Мартиросяна (Martirosjan, 2003), Л. Подымовой (Podymova, 2006), В. Слостенина (Slastenin, 2006), А. Тряпицыной (Trjapicyna, 1997), А. Хуторского (Hutorskoj, 2008) и других.

Мы видим свою задачу в создании дидактической модели, позволяющей успешно готовить студента к инновационной педагогической

деятельности в рамках базовой бакалаврской подготовки. Как известно, модель – это система, которая позволяет получить представление некоторого реального процесса, устройства или концепции, глубоко изучить этот процесс, выявить его существенные свойства. Определение готовности к инновационной деятельности мы, вслед за В. Лазаревым, трактуем как совокупность качеств педагога, определяющих направленность на развитие собственной педагогической деятельности, а также способность выявлять актуальные проблемы образовательного процесса, находить и реализовывать эффективные способы их решения (Lazarev & Martirosjan, 2003). Важное значение для нашего исследования имеют работы Н. Ильиной, которая выделила составляющие, критерии и уровни готовности педагога к инновационной деятельности. Автор выделяет личностную, теоретическую и практическую готовность (Piina, 2012). Критерии готовности педагога к инновационной деятельности выявлены, также, в работах Л. Подымовой. Среди них осознание необходимости инновационной деятельности, готовность к творчеству, согласованность личных целей с инновационной деятельностью, готовность к преодолению творческих неудач, технологическая готовность, способность к профессиональной рефлексии (Slastenin & Podymova, 2006, p.32-37).

В научной литературе выделяются разные виды педагогических инноваций: содержательно-целевые, организационные, технологические, управленческие. Особый интерес для нашей работы представляют инновационные образовательные технологии. Мы согласны с мыслью Е. Мерзон, что организационная и технологическая составляющие, в первую очередь, приводят к формированию готовности к инновационной деятельности и профессиональной карьере будущих учителей (Merzon & Askhadullina, 2016). Модель, представленная нами в статье, реализована применительно к овладению студентами именно образовательными технологиями.

Анализ выше указанных исследований позволил нам определить инновационную образовательную технологию как «системную организацию обучения, направленную на достижение прогрессивных качественных изменений в становлении личности обучающегося и не нашедшую в данный временной период распространения в массовой школе» (Vitkovskaya, 2017, p.121).

### **Методы и организация исследования** *Methodology and organization of the research*

Описываемая в работе модель «погружения» студентов в инновационную деятельность создавалась на базе учебной дисциплины

«Инновационные технологии в образовании» объёмом 2 зачётные единицы. Данная дисциплина читается нами с 2014 года студентам, обучающимся в Псковском государственном университете по образовательной программе «Начальное образование». В течение этого времени проводились наблюдения, опросы студентов и учителей, коррекция содержания и структуры дисциплины, ее связей с другими учебными дисциплинами и педагогической практикой. Данная статья содержит итог нашей работы, а также эмпирическое подтверждение ее эффективности.

В результате теоретического анализа, а также анализа собственной практики мы выделили пять циклов модели.



*Рисунок 1. Модель «погружения» в инновационную профессиональную деятельность*

*Figure 1 Model of «immersion» in innovative professional activity*

Один из них - цикл введения в содержание и мотивации. Работа здесь строилась на основе стимулирования внутренней и внешней мотивации студента. Начинается курс с лекций, где необходимо ознакомить студентов с контентом технологий, которые они будут изучать. Перечень таких технологий составлялся на основе указанных выше признаков инновационной технологии, а также соответствия их возрасту младших школьников (Vitkovskaya, 2017). Количество лекций минимальное, так как в основе модели - системно-деятельностный подход, предполагающий активную самостоятельную деятельность студентов. Задача преподавателя – в ходе лекций ознакомить студентов с наиболее интересными составляющими технологий, показать их результативность в обучении младших школьников, привести яркие примеры.

В нашей практике мы используем нетрадиционные (инновационные) лекционные стратегии, выполненные в русле интеллектуально-

развивающего обучения, обеспечивающие студентам удовольствие от “удовлетворения” интеллектуальных потребностей (Solovyeva, 2015) и способность к интуитивному переносу этих стратегий в собственную педагогическую практику на учебных практических занятиях по предмету, а также в дальнейшую работу с обучающимися младших классов школы (Solovyeva & Vitkovskaya, 2019).

После общего знакомства с технологиями студентам предлагается выбрать одну для подробного изучения и последующего проектирования на практическом занятии. Поскольку для внутренней мотивации необходимо обеспечить чувства интереса и удовольствия от вовлечения в деятельность (Byman, Lavonen, Juuti, & Meisalo, 2012), важно, чтобы из предъявленных преподавателем средств, студенты сами выбирали наиболее понравившуюся им технологию, добиться стремления к поиску дополнительной информации.

Наш опыт показал необходимость не только внутренней, но и внешней мотивации, подтверждая исследования о тонкой грани между ними (Byman et al., 2012). Забегая вперёд, отметим, что вполне оправдали себя используемые в следующих циклах модели методические рекомендации преподавателя, описывающие требования к создаваемому студентами проекту, примерную логику практического занятия, разрабатываемого обучающимися, критерии оценки процесса и результата работы студентов (Vitkovskaya, 2014).

Циклы представленной в статье модели не имеют чётких границ. Они перетекают и взаимопроникают друг в друга, но всё же, начинать следует с работы над мотивацией, так как именно она создаёт условия для погружения студента «вглубь», как бы на следующий уровень овладения инновационной деятельностью, где реализуется операционный цикл модели. Здесь преподаватель проводит мастер-класс: выбирает одну из технологий и строит по ней занятие так, как требуется впоследствии от студентов, показывая образец проведения практического занятия. Обучающиеся участвуют в этом «установочном» занятии, приобретая опыт самостоятельной работы.

Следующий цикл «погружения» – планирование. Студенты (назовём их разработчиками) в парах или группах создают проект, цель которого овладеть выбранной новой технологией теоретически и практически и подготовить занятие, на котором все прочие студенты группы (назовём их участниками) изучат данную технологию. Важные особенности здесь: педагог предлагает студентам - разработчикам цель и ряд указаний, направляющих их поиск и помогающих структурировать найденную информацию, при этом студент работает в условиях дефицита информации и отсутствия опыта реализации изучаемой технологии. Это позволяет ему

проявить все составляющие инновационной деятельности. Здесь происходит совершенствование исследовательской компетенции, способности работать с разными источниками информации: библиотекой, электронными и печатными каталогами книг, поисковыми базами в сети Интернет, где происходит отбор, также, ярких педагогических практик по реализации изучаемой технологии в начальных классах школы.

Принципиальное требование на данном этапе работы – разработка занятия на основе стратегии «Пребывания в содержании», суть которой заключается в том, что человек находится «внутри того, что является содержанием, предназначенным для усвоения» (Kolesnikova, 2006, p. 18). То есть, если на занятии изучается технология творческих мастерских, то все занятие строится как творческая мастерская, если тема – коллективный способ обучения, - то занятие проходит в парах сменного состава. Перед проведением практического занятия (ПЗ) преподаватель консультирует студентов, помогая, контролируя и корректируя их самостоятельную работу.

Далее модель предполагает цикл вовлечения (реализации). Задача студентов – разработчиков на данном этапе - проведение ПЗ, которое включает две части. Первая предполагает усвоение студентами-участниками теоретических основ изучаемой технологии в стратегии «Пребывания в содержании». Погружаясь (вовлекаясь) в работу в формате изучаемой технологии, студенты группы познают ее образовательные цели, то есть сферу применения технологии в начальной школе, психолого-педагогическую характеристику образовательной технологии, знакомятся со списком литературы и интернет – ресурсов по теме проекта.

Второй частью данного цикла модели является вовлечение студентов – участников во фрагмент урока в начальных классах в рамках изучаемой образовательной технологии в стратегии имитационного моделирования. Один из студентов - разработчиков проводит урок (в роли учителя), остальные студенты исполняют роли младших школьников. Подобное построение практических занятий позволяет эффективно усваивать основы и техники новой технологии всем: и тем, кто разрабатывает занятие, и тем, кто учится на нем за счёт развития способности учиться на собственном опыте, исследовать собственную деятельность, рефлексировать, творчески соотносить теорию и практику (Bruno et al., 2018; Bubnys, 2019).

Завершающий элемент модели – цикл оценки, - включает в себя самооценку, где студенты-разработчики анализируют плюсы и минусы проведенного занятия, а также оценку студентов - участников совместно с преподавателем. При этом даётся формативная оценка занятия с использованием стратегии «Шесть шляп мышления». Данная стратегия позволяет привлечь к анализу всех студентов группы, заострить внимание

на ключевых точках занятия: плюсах, минусах, эмоциональных моментах, возможностях улучшения содержания, логики и методики проведенного занятия. Наконец, по критериям, разработанным преподавателем совместно со студентами, и заранее известным разработчикам, даётся суммативная оценка деятельности студентов – разработчиков.

### **Результаты эмпирического исследования** *The results of the empirical research*

Описанная выше модель проходила апробацию в Псковском государственном университете (ПсковГУ) на факультете образовательных технологий и дизайна в рамках преподаваемой дисциплины «Инновационные технологии в образовании» в течение двух лет. Для выявления эффективности проведенной работы мы провели исследование с целью диагностики основных компонентов готовности студентов к инновационной деятельности. Вслед за Н. Ильиной мы полагали, что личностный компонент готовности представлен мотивами, направленностью, самооценкой обучающегося, теоретическая готовность предполагает знания в области педагогической инноватики, практическая готовность выражается в умениях, позволяющих осуществлять инновационную педагогическую деятельность (Pina, 2012).

Методами исследования явились анкетирование, опрос, анализ результатов деятельности обучающихся, экспертная оценка. Задания были разработаны по аналогии с методиками, предложенными Л. Харисовой для определения восприимчивости работающих учителей к инновациям (Harisova, 2012). Так, для выявления теоретического компонента готовности студентам была предложена анкета, в которой требовалось оценить свои знания относительно 14 новых образовательных технологий. Для диагностики личностного компонента посредством опроса выявлялась степень амбициозности студента, предполагающая нацеленность на инновации, а также при помощи анкетирования (анкета «Жизненные ценности» (Rezapkina G., 2019), у студентов констатировались разные виды мотивов, побуждающих к инновационной деятельности. Анализ результатов деятельности студентов и экспертная оценка осуществлялись по итогам педагогической практики и выявляли практический компонент готовности.

В исследовании приняли участие 51 студент Псковского государственного университета, обучающийся по программе «Начальное образование» – до и после изучения дисциплины «Инновационные технологии в образовании».

Формат статьи не позволяет представить все результаты диагностики. Отметим, что дисциплина, построенная в рамках описываемой нами модели, существенно повысила уровень теоретической готовности студентов, возрос, также, уровень личностной готовности, отражающей динамику развития внутренних и внешних социальных мотивов занятий инновационной деятельностью. Остановимся подробнее на сформированности практического компонента готовности, как, на наш взгляд, наиболее важного для будущего учителя – практика.

Основным критерием практической готовности мы считали «практические умения и навыки в использовании инновационных приемов, методов, средств, технологий обучения» (Ш'ina, 2012, р.83). В связи с этим, практический компонент готовности замерялся отсрочено - после педагогической практики, на которой студенты проводили урок с использованием инновационных технологий. В качестве диагностических методик выступали самоанализ студентом самостоятельно проведенного урока, а также метод экспертных оценок: оценка урока учителем школы, где студент проходил практику, и анализ преподавателем ВУЗа конспекта проведенного студентом урока.

Отметим, что до проведения нами экспериментальной работы по реализации модели «погружения» в рамках учебного курса «Инновационные технологии в обучении младших школьников» у студентов отсутствовал опыт организации инновационной деятельности младших школьников.

Результаты анализа работ, представленных студентами после практики, мы распределили по трем уровням на основе следующих критериев. Высокий уровень: использованное средство (технология, техника) является инновационным (напомним, что инновационной мы считали эффективную (по данным научных исследований) в образовании младших школьников технологию, не распространённую в массовой школе и не применяемую (или редко применяемую) учителем в классе, где студент проходил практику); урок (в части использования нового средства) разработан студентом самостоятельно (проводилась проверка на антиплагиат); урок логичен и целесообразен с точки зрения преподавателя; урок получил отличную оценку учителя; студент адекватно оценил целесообразность и результативность использованного средства.

Средний уровень: использованное средство является инновационным; урок частично заимствован из внешних источников, логичен и целесообразен с точки зрения преподавателя (либо: урок разработан студентом самостоятельно, но недостаточно логичен и целесообразен); получил положительную оценку учителя; студент адекватно, но

недостаточно глубоко оценил целесообразность и результативность использованного средства.

Низкий уровень: использованное средство нецелесообразно в рамках данного урока; материал урока полностью заимствован из внешних источников; нарушена логика урока; в целом результат урока достигнут (учитель оценил урок положительно), но за счет иных ресурсов урока; студент неадекватно оценил целесообразность и результативность использованного средства.



*Рисунок 1. Результаты диагностирования уровней сформированности практического компонента готовности к инновационной деятельности у студентов*

*Figure 1 The results of diagnosing the levels of formation of the practical component of readiness for innovative activity among students*

Как видно на рисунке, большинство респондентов – 29 человек (56%) показали средний уровень развития практического компонента готовности к инновационной деятельности. Основным недочётом в большинстве конспектов (26 человек) явились заимствования из внешних источников. Вместе с тем, лишь в 5 случаях (10%) выявлены погрешности в оценке целесообразности и результативности использованного средства, что говорит о высокой осознанности студентами проведённой работы.

Очевидно, что эти результаты явились следствием не только изучения студентами дисциплины «Инновационные технологии в образовании», но и всей образовательной программы, освоенной к моменту педагогической практики (4 курс). В связи с этим после практики был проведён письменный опрос студентов: «Где во время обучения в ПсковГУ Вы получили опыт, полезный для будущей инновационной деятельности в школе?». Предлагалось 10 позиций, учитывающих большинство видов учебной, научной и внеаудиторной деятельности студента, из которых можно было выбрать неограниченное количество. Большинство ответов было: «на практике в школе» - 65%; ответ «на специальном учебном предмете

"Инновационные технологии в обучении"» занял второе место с результатом 61%. Таким образом, следует отметить высокий потенциал дисциплины в формировании практического компонента готовности к инновационной деятельности.

## **Заключение** *Conclusions*

Подводя итоги, отметим следующие результаты исследования.

Создана и описана теоретическая модель организации учебной дисциплины в высшей школе, направленная на развитие у будущих учителей начальных классов готовности к инновационной профессиональной деятельности. Модель включает в себя пять компонентов, расположенных в логике «погружения», обеспечивающей углубление студентов в теорию и усложнение их практической деятельности за счёт необходимости работы в условиях недостатка информации, а также возрастания степени самостоятельности и творчества. Составляющими модели явились: цикл введения в содержание и мотивации, операционный цикл, цикл проектирования, цикл вовлечения и цикл оценки. В рамках каждого цикла модели специально отобраны образовательные стратегии, эффективно влияющие на формирование у студентов готовности к инновационной деятельности.

Результаты эмпирического исследования позволили установить эффективность предложенной модели. Авторы считают, что данная модель может быть использована в проектировании и реализации учебных дисциплин высшей школы, предполагающих высокую степень самостоятельной исследовательской деятельности студентов.

## **Summary**

Let us summarize the results of the research.

We created and described theoretical model of academic discipline organization in higher school aimed to prepare future primary school teachers for innovative professional activity. The model includes five components in “immersion” sequence that provides students immersion into theory, adding complexity in their practical activity by making them work under conditions of insufficient information and increasing the level of independence and creativity. Model components are: cycle of introduction to the content and motivation, operational cycle, design cycle, engagement cycle and evaluation cycle.

Within the scope of the model we selected specific educational strategies that positively influence student’s preparation to innovative activity. In informative-motivational cycle these are non-traditional lecture strategies within the frame work of intellectual developmental teaching as well as the strategy of information exchange. It provides student-developer with a conscious choice of content, creating a new educational product (class with the objective for

participating students to master innovative educational technology). Operational cycle is a backbone element of the model. It includes recorded teacher's master class that includes model prototype and gives an example of model application in practice. During the design cycle a student creates an educational project, where he (she) performs productive activity under contradictory conditions. On one side the student works with in a rigid frame work: objective (to teach other students), project structure, plan of action; on the other side – he (she) operates with insufficient information on the technology being studied. It enhances research aspect of the student's activity, which is needed for innovations implementation. Principal requirement at this stage is to develop a study session based on “Being within content” strategy that allows studying object “from within”.

Engagement cycle, similar to the previous one is based on “Being with in content” strategy. It also requires the strategy of simulation, when a lesson in primary school is simulated during a class with the use of the studied technology. Finally, evaluation cycle implies formative (with the use of “Six hats of thinking” method) and summative assessment, which implies collaboration of participating students and a teacher in order to provide an overall score for the product created and implemented by the student according to predefined criteria.

The results of empiric study showed the efficiency of the proposed model. The authors believe that this model can be used in the design and implementation of higher school disciplines that involve a high degree of independent research activity of students.

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## WHAT IS VALUABLE IN THE ACADEME: CORPUS-BASED ANALYSIS

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**Abstract.** *The paper focuses on the corpus-based analysis of academic discourse values. The research aim is to reveal how teachers transmit academic discourse values through their everyday interactions with students (during lectures, seminars) and to reveal, which values are relevant for the students (based on the analysis of their essays, research papers and some such). The research relies on corpus-based approach and primary methods used are a semantic analysis and a context analysis as well as definition analysis of evaluative means. The research results have revealed that various values play important role in academic interactions and shape the image of the academe – on the local as well as on the global scale. The study of the contexts containing the word valuable in British National Corpus (Davis, 2008-), British Academic Spoken English (Nesi & Thompson, 2000-), British Academic Written English (Nesi, 2008-), Corpus of Russian Student Texts (Rakhilina, Zevakhina, & Dzhakupova, 2013-) and Michigan Corpus of Academic Spoken English (2002-) has revealed that the values of academic discourse can be subdivided into six domains: emotional, cognitive, educational, research-related, academic life-related, topic- / area-related. The further applicability of research findings manifests itself in various avenues of research: linguistics (evaluative means), axiology (cross-disciplinary study of values), teaching practices (academic discourse genres) and others.*

**Keywords:** *academic corpora, academic discourse, axiology, evaluation, values.*

### Introduction

The corpus-based research of the values in academic discourse is a part of a wider research on evaluative means in the academic discourse and their interrelation with the axiology and values of the academe. It is believed (Suleimanova, Yaremenko, & Vodyanitskaya, 2018; Vodyanitskaya, 2018) that the latter are strongly interrelated with evaluation. The study of academic values in English and Russian academic corpora is aimed at revealing the values of the academe across disciplines (for the corpora analyzed in this research cover various branches of the academic curriculum) and on the global scale, for the values of English and Russian academic discourse have been analyzed in this research.

The importance of the topic manifests itself in the scholarly attention to the ethics of academic discourse as well as to research ethics. Education researchers dwell on the ethics of argumentation in the framework of academic discourse (Robinson, 2009). Moreover, principles of success in research environment are interconnected with ethic values of academic discourse (Collister & Deliyannides, 2019). Honesty, trust, fairness, respect, responsibility and courage are regarded as symbols and proof of academic integrity (Fishman, 2014). Nowadays, when the universities state their mission, they rely heavily on the unwritten and unspoken, yet existing values of academic discourse. Therefore, the analysis of the way the academic values are perceived and transmitted is a relevant issue.

To reveal the academic values, we relied heavily on corpus-based approach and analyzed the texts from academic corpora – we searched for the contexts in which the words *valuable* (for English corpora) and *tsenniy* (for the Russian corpus) were used and analyzed, which realia of academic discourse they characterize. Teachers transmit academic values to their students because they are relevant in terms of research ethics, as well as in terms of empowering students for their future professions, when their ethical behaviour will play a crucial role for their career. At the same time, the corpus of students' written texts was analyzed to reveal which values are perceived by the students as relevant in their research practice.

Therefore, the research has revealed that the values of academic discourse belong to various domains: emotional, cognitive, educational, research-related, academic life-related, topic- / area-related.

### **The relevance of research**

As far as values are interconnected with evaluative means (Ivin, 2006), the first step towards analyzing them and extracting them from the written text is through the analysis of evaluation. J. Channell aptly puts it, the “analysis of evaluation can be removed from the chancy and unreliable business of linguistic intuitions and based on systematic observation of naturally occurring data” (Channell, 2002, p.39). The author claims that when analyzing evaluative linguistic means, it is the corpus-based approach “that produces a sound description of this aspect of language”, moreover, “it allows observations which go beyond what intuitions can achieve, in revealing evaluative functions which intuitions fail to pick up” (Channell, 2002, p.39). As far as evaluation is interconnected with the system of values it seems relevant to apply this corpus-based approach to researching values of the academe.

D.S. Giannoni's research focuses on the mapping of the values of academic discourse based on the analysis of evaluative lexemes which allow to group the

values into “four categories linked to different axiological variables: size, novelty, goodness and relevance” (Giannoni, 2010, p.212). When it comes to evaluation, the figure of the observer is extremely important, for in some cases, a lot depends on the ‘eyes of the beholder’. D.S. Giannoni claims that “size and novelty are the two more observer-independent values, because their perception is less a matter of personal opinion than the evaluation of goodness and relevance” (Giannoni, 2010, p.213). In this study, the focus is – specifically and intentionally – on the contexts containing the adjective *valuable* in English academic spoken and written corpora, as well as on the entries with the word *ценный* (*valuable*) in Corpus of Russian Student Texts. Therefore, the emphasis is on the realia that are valuable for academic discourse participants. The emotional, cognitive, educational, topic-related, research- and academic life-related domains within which various values of the academe exist, is one more attempt to group various values that constitute the core of this specific type of discourse.

### **Methodology: research process**

The research process involved several stages.

First and foremost, the relevant corpora were selected. We focused on academic corpora (both written and spoken).

Secondly, we selected the contexts containing the word *valuable* in English corpora and the word *tsenniy* (*valuable*) in Russian corpora.

Further on, we analyzed the objects, or realia of academic life, that were characterized as valuable, and focused our attention on the contexts, to grasp the essence of what is rated as valuable in each context.

To reveal the values of academic discourse, we relied on semantic analysis, discourse analysis and on context analysis, based on corpus-based approach, when the amount of texts under analysis provides for relevant conclusions (both in terms of quality and in terms of quantity).

The last stage of the research involved grouping the values of the academic discourse based on dominant characteristics of the realia rated as valuable as well as based on contexts, in which they appeared in the texts.

### **Methodology: opting for corpora**

To analyze values of academic discourse, we have turned to various corpora (Michigan Corpus of Academic Spoken English, British National Corpus, British Academic Spoken English, British Academic Written English and of Russian Student Texts).

The first stage of the research focuses on the data collecting. Initially, we find out, in which contexts the adjectives *valuable* and *tsennyi* (*valuable*) occur in written and spoken academic corpora. Spoken academic contexts are overwhelming in their manifestations: lectures, colloquiums, teacher's conferences, scientific conferences, seminars. The unique nature of the spoken corpora manifests itself in the fact that the material for lectures, for example, is meant to be prepared (written) beforehand, and, in this respect, we deal with the written embodiment of academic discourse, at the same time, during a lecture a teacher may ask questions or start telling topic-related stories. To grasp the moment of improvisation or interaction is extremely important, for this is the time when values are likely to be voiced. Therefore, the chance to search and browse corpora of spoken academic English is a unique one. Spoken corpora has already attracted scholars in terms of academic culture and lecturing styles (see, for example (Chia-Yen, 2012)).

Let's briefly dwell on the corpora that have been selected for the research:

**British National Corpus** (Davis, 2008-) offers search options that allow the researcher to select the body of texts needed. In the framework of this research, we have opted for written academic and spoken academic texts. Moreover, it is possible to choose, for example, an academic division (Humanities, Arts, Sociological science, et cetera) as well as the type of academic genre (essay, paragraph, thesis, letter) as well as academic event (lecture, colloquium, conference etc.). Thus, for example, the research has revealed that the word *valuable* is often met in the Teachers' conference focusing on the discussion of assessment procedures. The corpus provides such relevant information as: the date of the event (e.g. September 3, 1992), the number of participants (7) as well as the quantity of utterances pronounced (1966). Moreover, the status of the event is highlighted (educational and informational). This seemingly extra-linguistic data is extremely valuable for our research, for it helps define the context in which the value-related word appears.

Among various aspects that **The British Academic Spoken English** (Nesi & Thompson, 2000-). The corpus facilitates, the most relevant and important for this research are: "the frequency and range of academic lexis, patterns of interaction, including turn-taking and topic selection, the representation of ideas and the expression of attitudes" (for other aspects see: BASE web-site). Each entry is provided with the relevant information on the title of the event (e.g., Introduction to the Laboratory), academic division (Life Sciences, for example), speech event (lecture, e.g.), academic department (Biological Sciences). There is evidence to suggest that this corpus is discipline-oriented, for it is very explicit about the academic divisions and subdivisions,

which makes it relevant for cross-disciplinary analysis of the values of the academe.

**The British Academic Written English Corpus** (Nesi, 2008-) was collected as part of the project, 'An Investigation of Genres of Assessed Writing in British Higher Education'. As stated on the BAWE web-site, "the corpus is a record of proficient university-level student writing at the turn of the 21st century. It contains just under 3000 good-standard student assignments (6,506,995 words). Holdings are fairly evenly distributed across four broad disciplinary areas (Arts and Humanities, Social Sciences, Life Sciences and Physical Sciences) and across four levels of study (undergraduate and taught master's level). Thirty main disciplines are represented" (Nesi, 2008-). It is worth mentioning that the BAWE provides the users with the information about the genre (essay, critique, methodology recount etc.). The authors of the BAWE as well as of BAWE pay a lot of attention to the description of extra-linguistic contexts. We argue that for a written corpus, it is extremely valuable to give a wider linguistic context, while for a spoken corpus the extra-linguistic one is of prime importance.

In this research, the data provided by **The Corpus of Russian Student Texts (KPYT in Russian, or CoRST)** (Rakhilina, Zevakhina, & Dzhakupova, 2013-) have also been analyzed. The corpus is the collection of texts written by the students from various universities of Russia. The number of words of the corpus amounts to 2.6 million words. The CoRST is intended for analyzing language variability and linguistic changes, as well as the mistakes in the language use. The corpus is relevant for our research, for it contains student essays, reviews, reports, articles and other assignments that contain important information on what is valuable in the academe through the prism of contemporary students' perceptions. Importantly, the information about the degree the student is pursuing, as well as the year of study and the disciplinary area, accompanies every written text in the CoRST (for more information see (Rakhilina, Zevakhina, & Dzhakupova, 2013-).

Last but not least, is **The Michigan Corpus of Academic Spoken English** (2002-) which offers a variety of search options that enhance any research horizons. What makes this corpus unique, is the opportunity to choose speaker attributes (age, gender, academic position, native speaker status, first language) and transcript attributes (speech event type, academic division, academic discipline, participant level, interactivity rating). With 152 transcripts, this ability to browse and search with the opportunity for such precise inquiry is impressive. The relevance of the corpus data for our research is evident, for one can create all the contexts imaginable for the word *valuable*, and analyze existing and non-existing contexts. So, for example, for the word *valuable*, initially, we 'created' the following context: speaker attributes: gender, age,

native speaker status, first language – all, while academic position – junior graduate student. As for transcript attributes, we have opted for colloquium, Humanities and Arts, American Culture, junior graduate student, highly interactive. The search and browse result is zero matches and zero transcripts. These zero results are also extremely valuable for the research, for they show the extra-linguistic contextual limits of the evaluative *valuable*.

### **Data collection: searching and ranking**

After having opted for the above mentioned corpora, we have focused on the contexts in which the words *valuable* and *ценный* (*valuable*) appear. Initially, the contexts were grouped according to thematic principle: the examples were grouped into two categories: relating to university life (academic interactions, institutional relationship etc.) and to the topic that is being discussed during the lecture, a seminar, or in an essay or another assignment.

Further on, the semantic analysis of 1300 contexts has revealed that within these two major groups there is a diversity of values and the division into just two types is very rough. Therefore, the contexts were grouped into six domains, where various values occur, they are: emotional, cognitive, educational, research, academic life-related and topic-related domains.

One might ask, on what grounds we differentiate between various domains, for, strictly speaking, every value is connected with the university life. We have to admit, that sometimes the margin between the contexts is very fragile. So, for example, when the teacher reveals for the students the relevance and importance of their teacher's actions (the teacher stays after classes to make sure the students understand the aim of the project and their role in it, for example), describes the teacher's attitude to work and to students, she speaks about the academic life, the interactions between the people involved into institutional relationship. What is more relevant and specific here, though, is the fact that she describes the teacher's actions and considers them valuable through the prism of her own emotions that she voices. Emotional domain, though describing academic life, for example, as illustrated in the examples below, is at the same time a manifestation of what the person **feels** about various aspects he or she considers valuable.

When grouping the contexts, we focus on the evaluative word and the object it defines. Where the corpus allows, wider contexts are being analyzed for a deeper understanding of what the speaker, or writer, means. We deliberately bring in a wider context so that the whole picture was vivid.

The final stage of the research is devoted to interpreting the contexts within each domain. As far as values and evaluations are interconnected, the interpretation of the data is important and valuable step for a deeper

understanding of nature and ontology of the values in the academe as well as evaluations.

### Corpus-related Research

Various aspects of BNC have been studied by the scientists across the globe. Thus, for example, (Lijffij & Nevalainen, 2017) offer a simple model for recognizing core genres in the BNC. The authors “selected only the subgenres that are prototypical representatives of these genres: demographically sampled conversations, prose fiction, broadsheet newspaper texts and academic prose” (Lijffij & Nevalainen, 2017). Moreover, “focus on structural properties of texts, analysing word and sentence length, type/token ratios and relations between part-of-speech categories. Such basic text analytic measures can be observed and analysed in any set of written texts that come with the required markup” (Lijffij & Nevalainen, 2017). Mostly, the BNC corpus has been studied in the sphere of genres (Nesi & Gardner, 2018; Hsu, 2018).

Extralinguistic parameters such as laughter in academic talk have been studied in (Carey, 2014); MICASE is mentioned in (Bamford & Bondi, 2005): “corpora of spoken academic discourse have enabled us to put our fingers on exactly those features which make academic so much more like other spoken discourse rather than like written discourse with respect to previous studies. For example, like its conversational counterpart, spoken academic discourse avoids overt confrontation and prefers consensus building”.

### Findings and results

Various contexts containing axiology-related words have been analyzed. The contexts show that values of academic discourse are diverse and multi-layered: they are existential, social, ethical, esthetical, discipline-, academic life-, knowledge-related. Values of the academe (British, American and Russian) can be grouped into six domains: emotional, cognitive, educational, research, academic life-related and topic-related.

#### Values within the Emotional Domain

As it was mentioned above, the emotional domain deals mostly with the feelings of the speaker or writer. Let's turn to the following example from MICASE:

*no one had told me how to insist that my creative work be, evaluated differently than your scholarly work is. these all of the things that I didn't know when I was coming through twenty-five years ago. and these are all the things that you know now. you see these are the things that Rackham takes out time, to make sure you have this information I can't tell you how **valuable** that is. and I*

*can't um, I can't tell you, what it means, for minds across disciplines to be able to meet. you're not gonna have that anywhere else. than in the academy. minds across disciplines wide expanses of disciplines. and it makes you a richer person it makes you a fuller person. it makes you a warmer person it makes you a better person...* (Michigan Corpus of Academic Spoken English, 2002).

In this, mostly interactive, Career Planning and Placement Workshop, the speaker (senior faculty, female, 31-50 years old) explains to her students the value of having the opportunity to meet their teacher after classes and to discuss relevant issues, concerning the curriculum and the discipline. The teacher gives an example from her own life, when she faced various challenges connected to her academic life, with uncertainty being one of them. By contrast, her students have the opportunity to challenge the uncertainty. Student uncertainty has been in the focus of academic attention, see, e.g., (Jordan, 2015; Hartner-Tiefenthaler Roetzer, Bottaro & Peschl, 2018), for it inhibits the incentive to learn and to study. The teacher emphasizes the role of her colleague by using the emphatic *I can't tell you how* two times. Moreover, she turns the students' attention to the fact that that is valuable from the institutional and academic point of view. Moreover, she attributes a great role to the interaction between the minds across disciplines. An outcome of such interactions is the transformation of students' personality – psychologically (*a fuller person*), emotionally (*a warmer person*), spiritually (*a richer person*) and socially (*a better person*). In this vivid example, we move from purely emotional domain into existential categories. It is worth mentioning, that this Workshop was initiated by the students who wanted to know what it means to be a faculty member. It seems that through storytelling, through personal examples, the teachers offer their students the value landscape of the academic discourse, for such actions like staying after classes, or meeting academic minds might be perceived by the students as something that is presupposed by the very fact that they are students, and there is nothing special in it. The teacher has unveiled for the students the value of their everyday experience in the academe. Being once voiced, these values are meant to stay with them, perceived by them and appreciated by them. The educational as well as professional outcomes of such talks are invaluable.

### **Values within the Cognitive Domain**

When the word *valuable* is used by a teacher to refer to the results of students' cognitive operations, the contexts illustrating it are grouped into the cognitive domain. The following example shows that the teacher (junior faculty, female, 24-30 years old) describes the student's comment as *valuable*:

*... okay I'm gonna carry that comment on because I think it's a very valuable comment here. um, the question is it fair, to jump on one show and to say that this show should embody everything, that's needed for, a positive portrayal of a group? um and I'm gonna recall, your article that you had to read*

by Graves, just some thoughts from the Graves article, to try to frame your thoughts about the Cosby Show... the first thought, is... Graves makes a distinction... (Michigan Corpus of Academic Spoken English, 2002-).

There are also contexts, when the value of experience and expertise is highlighted – in all the cases analyzed, the author of the evaluative judgement either claims that experience is valuable, or calls the audience for undertaking a cognitive journey to decide what is worth learning, and what is not:

... *be it's not exactly a bad thing to, learn, new stuff. yeah, that's true, um, definitely. um <PAUSE:04> but how do you know what kind of, what kind of stuff that you, that you wanna learn...? ho- I mean how do you know **what kind of stuff is, is more important or more valuable?** yeah. **you have to experience it all**, and then you get to, to decide after that. I mean that's definitely, that's definitely, that's definitely um, that's definitely, true, to s- I mean with- within some boundaries right though. ...*(Michigan Corpus of Academic Spoken English, 2002-).

In this example, the speaker (junior graduate, female, aged 24-30) emphasizes that to understand what is valuable, what is worth studying, one should receive a lot of experience before one decides for him or herself what deserves studying. The speaker backs up her opinion by repeating the evaluative adverb *definitely* four times. In this context, the value of experience and expertise is highlighted.

If we compare these two examples from the cognitive domain, we will see that when the teacher calls the student's comment *valuable*, this comment is the result of the students' cognitive work. The comment corresponds to the teacher's ideas and to the main topic of the lecture, and the teacher has the authority to name the comment *valuable*. In the second example, the junior graduate is ruminating excessively on the cognitive processes of deciding on the value of stuff one is supposed to learn. The speaker does not evaluate anybody's cognitive abilities, but calls for the evaluation and cognitive action. In this respect, these two examples are different in terms of the nature of evaluation, but they are equal in terms of the values they emphasize.

The examples from The Corpus of Russian Student Texts have also shown that students tend to attribute a great importance to experience. It is worth mentioning, that mostly junior students state the value of experience in their essays:

Table 1 *The value of experience stated (cognitive domain)*

Transliterated version of the Russian text	Translation
<p><i>My cherpaem znaniya iz knig, fil'mov, ot svoih znakomyh i, razumeetsya, uchimsya na sobstvennyh oshibkah, priobretaya, takim obrazom, tsennyi opyt. No vstremlenii poluchit' kak mozhno bol'she znaniy za maksimal'no korotkoe vremya lyudi zabyvayut o tom, chto nedostatochno prsto uznat' chto libo, vazhno `eto esche i ponyat', inache takie znaniya budut absolutno bespolezny na praktike (Rakhilina, Zevakhina, &amp; Dzhakupova, 2013-).</i></p>	<p><i>We learn from books, films and, definitely, learn from our own mistakes, getting through this <b>valuable experience</b>. At the same time, in our pursuit of getting as much as possible within a short period of time, we forget that it is not enough just to learn something. It is vital to understand the essence of what we have learnt, otherwise, such knowledge is useless and impractical (translated by Albina Vodyanitskaya and Vera Yaremenko).</i></p>

The Table 1 shows that in this essay, written by a first-year student pursuing bachelor’s degree in sociology, the value of the experience is emphasized. At the same time, the student highlights the importance of learning and understanding, otherwise, such knowledge proves useless. It seems that students across disciplines and cultures attribute a crucial role to experience and expertise. Interestingly, in CoRST mostly junior students emphasize the value of experience in their written assignments. We argue that this value is rooted in the fact that the students are at the very beginning of their university life and they wish to acquire as much practice as possible. It is worth mentioning that both in CoRST and in MICASE contexts students warn the readers or the audience against consumerism in learning: one is expected to be sophisticated when choosing what to learn. This wish to warn the potential reader proves the dialogic nature of academic discourse and can be traced back to M.M. Bakhtin’s works on the polyphony of written texts (Bakhtin, 1986). Nowadays, the polyphony of academic discourse is studied in terms of the dialogue with the *Other* (Suleimanova, 2018). O.A. Suleimanova’s research has revealed a multi-layered figure of the *Other* in the academe. The author claims that polyphony is inherent in academic discourse and in the process of academic communication new hypotheses and theories are being crystallized and formed (Suleimanova, 2018, pp. 196-197).

#### **Values within the Academic Life-related Domain**

Academic interactions are based on various values, some of which are explicitly verbalized in Student behaviour code, while the others exist unvoiced. “Academic discourse, both written and spoken, is highly patterned, interactive and socially constrained” (Bamford & Bondi, 2005, p. X). Let’s have a look at the following example that demonstrates the way the teacher (Native speaker,

American English senior faculty, female, aged 31-50) evaluates the feedback teachers get from students:

*... **frightening** when you first start **having students write back to you**, you know that was one of the methods we learned as Lily Teaching Fellows, you know that you have them write back to you well how'd you think class went today. well what would you like to do more of? you know what would you like to do, it's very frightening. but, if you can just, kinda **gird your courage**, then you find it's a very **valuable**, you know **exchange**. (Michigan Corpus of Academic Spoken English, 2002-).*

In this entry, the teacher is discussing a new trend in teaching: receiving students' feedback. The first impulse of evaluation is entwined with emotions: it is frightening, yet, when one girds his or her courage, one can find this exchange valuable and promising. Interestingly, the teacher emphasizes, that it's not the feedback that frightens her, but the fact that the students might offer some changes in the curriculum or in the discipline content. Institutionally, the role of feedback- and assessment-provider is attributed to teachers, "discourse is constitutive of the community and its identity and has to be learned by interaction between the expert and the novice member" (Bamford & Bondi, 2005, p. XIII), so, this new experience requires braveness from the teacher. Nowadays, students' feedback is an emerging trend in teaching practice, and it is researched on the global scale (see, e.g.: Zenobya, Chan, Meadus, & Chien, 2017; Masantiah, Pasiphol, & Tangdhanakanond, 2018). At the same time, this is a brave new trend that requires certain approach and skills.

### **Values within the Research Domain**

Doing a research is one of the most important aspects while studying at a university. Research domain focuses mainly on writing, for as K. Hyland aptly puts it, "writing is a socially situated process of making meanings through texts, so that becoming a competent writer is not just a linguistic or cognitive process but a sociocultural one, which requires learners to appropriate the meanings created in the contexts in which they operate" (Hyland, 2016, p.157).

Research is values-oriented for "members of a discourse community have developed conventionalized or standardized solutions both as writers and as readers to manage recurrent social tasks (both written and spoken) since texts respond to recurrent communicative needs. In academic discourse textual patterns typical of genres in various disciplines come to assume a particular social valency within the discourse community and apprentice readers and writers can ill afford to ignore them (Bamford & Bondi, 2005, p. XI).

When doing a review of the conference topics, the first-year student majoring in Linguistics, comes to a conclusion:

Table 2 *Conference's value stated (research domain)*

Transliterated version of the Russian text	Translation
<i>Konferenciya nosila metodologicheskij karakter [...] Materialy konferencii predstavlyayut soboj ochen' tsennyi istochnik po osobennostyam i granicam primeneniya `etogo metoda v lingvisticheskoy tipologii, a takzhe interpretacii poluchennyh rezul'tatov (Rakhilina, Zevakhina, &amp; Dzhakupova, 2013-).</i>	The conference focused mainly on methodology issues [...] The conference materials are <b>a very valuable source</b> for analyzing, to what extent this method is applicable in linguistic typology, as well as for interpreting the results (translated by Albina Vodaynitskaya and Vera Yaremenko)

As we can see from the Table 2, the student emphasizes the value of the conference through the opportunities that it provides for a research. Implicitly, the possibility of a qualitative research is made (through mentioning interpreting). According to S.L. McGregor, it is the interpretation that makes a research qualitative (McGregor, 2018). The very naming the conference materials *valuable* inspires the reader of the review to give a closer look at the conference.

One more example from a student's thesis also falls into the category of research domain: here, the student focuses on linguistic data as a source:

Table 3 *Linguistic data as a value (research domain)*

Transliterated version of the Russian text	Translation
<i>massiv neslovarnyh slovoform yavlyaetsya istochnikom tsennogo lingvisticheskogo materiala, a imenno: novyh slov i terminologii, abbreviatur, nestandardnyh form skloneniya i spryazheniya (Rakhilina, Zevakhina, &amp; Dzhakupova, 2013-).</i>	<i>morphological forms that are not fixed in dictionaries are a valuable source of linguistic data: new words and terminology, abbreviations, non-standard forms of conjugation and declension (translated by Albina Vodaynitskaya and Vera Yaremenko)</i>

In this utterance from Table 3, through stating the value of a linguistic source, the student either invites the reader (a potential linguist) to research the linguistic material mentioned, or, what is more likely, justifies his choice of linguistic material for analysis.

When doing a research, students are involved in a breath-taking activity of searching for information, looking for solutions, structuring and arranging research findings. There are specific areas in the structure of a course paper or thesis, for example, which focus on the practical and theoretical values of the

paper. In Russian academic discourse they are expressed by the words *cennost'* and *tsenniy* (*value* and *valuable*):

Table 4 A practical value of research results stated (research domain)

Transliterated version of the Russian text	Translation
<i>Rezultaty dannogo issledovaniya predstavlyayut prakticheskuyu tsennost dlya vseh lyudej, kotorye planiruyut rabotat' ili uzhe rabotayut v organizacijah s korporativnym dress-kodom</i> (Rakhilina, Zevakhina, & Dzhakupova, 2013-).	The research findings have a <b>practical value for all the people</b> , planning to work, or working in dress-code oriented corporations (translated by Albina Vodaynitskaya and Vera Yaremenko)

As it is shown in Table 4, the authors use the words *valuable* and *value* not in the sense that the first example implies, but differently: it is a standardized procedure to state the practical as well as the theoretical value of specific parts of the written text. The writer is 'inviting' the reader to appreciate the values of his or her practical and theoretical contribution.

#### Values within the Educational Domain

If the research domain is connected with searching for the solutions, looking for relevant scholarly information, creating a new text (course paper, thesis, dissertation etc.) and presenting it to academic society, educational domain contains examples which address the issues connected with learning various disciplines – not researching, but learning. A set of examples below, from (Nesi & Thompson, 2000-) and (Michigan Corpus of Academic Spoken English, 2002-), illustrates teachers' perceptions of what is valuable in the educational process.

During the lecture on formal logic, the teacher is speaking about a rule and is describing it as *valuable*:

*it's just an additional rule that will save you time and effort and it's a very valuable rule for that are there any questions about whole thing well when i said there were various versions of this rule let 's ha just mention one to start with the rule of theorem introduction which is indeed* (Nesi & Thompson, 2000).

Rules as well as the parts of the books can be valuable for educational purposes:

*... let's start out with the checklist, and if you notice how each chapter starts out with a little introduction and then right away there's a checklist, that's very valuable not only for the reading but also for your assignments today, photographs that you brought in* (Michigan Corpus of Academic Spoken English (2002-).)

Here, the speaker (senior faculty, male, 51 years old and over) emphasizes the educational value of a checklist, for self-check is important in the educational process, because it also relates to self-assessment and feedback.

In the examples above teachers highlight the value of various discipline-specific phenomena, while in the next one, the teacher enters a universal plain, emphasizing (during a lecture on biological sciences) the value and the universal nature of laboratory methods:

*... if you intend to become a professional biologist evidently this laboratory course is **extremely important** to you even if you don't intend to become a professional biologist we all think that training in laboratory methods is very **valuable** to you in the sense of transferable skills because the skills of observing understanding and reporting are going to be useful to you in any profession whatever profession you choose be it biology or being a policeman so we think that these laboratory courses are extremely **valuable** and extremely important to you so you are now launched into your career as a professional biologist ...* (Nesi & Thompson, 2000).

In the first instance, the teacher explains, in what sense the laboratory methods are valuable: transferable skills that will be acquired by the students are named, evaluative lexis, emphasizing the value of the laboratory methods is relied upon: *extremely important, extremely valuable*. What is important, is that the teacher links the use of laboratory methods with students' professional careers and even demonstrates universal nature of the skills-to-be-acquired. Through the combination of linguistics (emphasizing adverb *extremely*, evaluative adjective *important*), didactics (naming of certain transferable skills) and sociological context (*you are launched into your professional career as biologists*) the teacher unveils the essence, the meaning of laboratory methods, showing their value and importance. Analyzing this vivid example, we see that for educational purposes, when the teacher labels something as valuable, he or she explains, on what grounds this or that phenomenon or discipline is considered valuable. All the educational roots are meant to bring students to their professional success, so teachers feel the incentive to disclose the value of each discipline for them – for the sake of motivation and academic success.

The research findings have revealed that it is possible to include into educational domain examples when students refer to education as a value:

Table 5 *Educational Domain*

Transliterated version of the Russian text	Translation
<p><i>Tsennost' gumanitarnogo obrazovaniya otnyud' ne v tom, chto ono uchit stremit'sya k celi, a v tom, chto chelovek yasno vidit tsennost' v sovershenii samogo dejstviya</i> (Rakhilina, Zevakhina, &amp; Dzhakupova, 2013-).</p>	<p>The <b>value</b> of Humanities manifests itself not in the fact that Humanities teach a person to pursue a goal, but in the fact that a person clearly sees the value in the action itself (translated by Albina Vodyanitskaya and Vera Yaremenko).</p>

In this excerpt presented in Table 5 and retrieved from the paragraph, written by second-year student pursuing bachelor’s degree in Design, the value of Humanities is in the focus of attention. The student does not merely states the value of Humanities, but reveals what aspect of the academic division is especially valuable for him.

**Values within the topic-related domain**

There is a scope of examples with the word *valuable* that does not directly corresponds to the academic values, but highlights the values relating to the broader topic of the colloquium, lecture, essay, or another institutional event or assignment. Teachers in there lectures and students in their essays attract their listeners’ and readers’ attention to phenomena they consider valuable:

[...] *both what is valuable in humility and what is fruitful in the scientific temper.* Parenthetically, erm he says somewhere in his autobiography that the one thing that consoled him in the nineteen-hundreds when he was so miserable, was the devising of, was the devising of prose rhythms. (pause) And he did indeed, did he not, develop a beautiful ear. That was one sentence which I read, and it is perfect. (Davis, 2008-)

The teacher read out loud a passage, where the author states the value of humility. Further on, the teacher explains this passage with an example from the author’s biography, when humility resulted in the devising of prose rhythms. The value of humility is highlighted by the fact that it lead to something life-affirming. It seems that through this example the teacher tries to show to his students that a person can find good even in humility, people tend to avoid unpleasant circumstances, but when they do come, creative work and belief in good outcomes, may help even create something meaningful for humanity. What seemed to be unbearable from the every-day life point of view, became a consolation and a cornerstone for the author’s creative work.

The following example is from British National Corpus (Davis, 2008-), and what the teacher considers valuable here, is accompanied by an explanation containing evaluative lexis:

*... the rationale is that the degree of parental investment and its effect on the offspring vary with the offspring's age, and as (-----) says, one of the fundamental principles of this is that, by and large the younger the offspring the more **valuable** any unit of parental is to it, and the more efficacious it is, and the most obvious example of that would be food. Obviously, if you're a very tiny newborn baby, the amount of food you need to eat, put on extra pound weight, is, is not going to be the same as if you are a much larger child, and you want to put on proportionately the same amount of X pounds, whatever it would be, it would be same (Davis, 2008-).*

In the essay on children's psychological development the student (grade M, level of studies – two), dwells on the factors that are valuable while socializing:

*... There is little doubt however that factors such as attachment type and early experiences with reciprocal friendships are **valuable** in learning the necessary skills to socialise and which therefore give you an increased chance of being popular and having friends. It has been shown that lack of friends or being unpopular may lead to problems with psychological development and these seem to be more extreme with rejected rather... (Nesi, 2008-)*

## Conclusions

The research has revealed that corpus-based approach is a reliable one for revealing academic values. Teachers voice the values that are shared by the participants of academic discourse during the lectures and seminars.

Students voice the values they share and consider relevant when writing their research.

The values of academic discourse can be classified into emotional, cognitive, educational, research-related, academic life-related, topic- / area-related.

Values connected to emotional domain are mostly interrelated with the experience of communicating with other members of academic discourse: teachers during the lectures remember with gratitude the academics that empowered them with their support, who trusted in them and helped them overcome various challenges.

Values within the cognitive domain are revealed in the contexts when teachers emphasize various aspects that are valuable from cognitive point of view: when, for example, they refer to the results of students' cognitive operations. Students' academic endeavor, their perseverance to achieve certain academic results is perceived as valuable by their teachers.

Values within the educational domain are related to books, rules, certain behavior patterns that are relevant in the educational process (for example, training to use laboratory methods is valuable for future biologists).

Within research-related domain students (based on the analysis of the texts from the written corpora) dwell on practical, theoretical value, as well as on the value of dictionaries, approaches and other aspects connected with the research. It is relevant to mention that research-related values are mainly connected with the research ethics and the attitude with which the researcher approaches their research.

Values connected with academic life deal with behavioral patterns of teachers and students. Mutual respect, awareness of various rules governing academic institutionalized relationships, are considered to be valuable for academic life. Importantly, the analysis of corpora has revealed that students' feedback is valued by the academicians for it facilitates education process.

The question of topicality is relevant for academic discourse, for it is connected with research domain to the most extent. Therefore, when writing their papers, students emphasize that the topic they study is valuable. Teachers, for example, when lecturing, show that this or that topic under discussion is valuable in terms of ethics or in terms of applicability.

The findings have shown that the journey once undertaken into the world of academic values does not promise to be a short one. The research has revealed that the adjective *valuable* and *tsennyi* (valuable) often goes hand in hand with evaluative nouns and adjectives, thus specifying this or that aspect of the phenomenon that is considered valuable. The research gives certain insights on teaching English and Russian academic discourse: the corpora provide vast vistas of various academic values as well as genres, therefore, teaching the ethos of academic discourse as well as its established writing and speaking patterns.

Various corpora have made it possible to grasp a bulk of contexts that represent diverse values and to propose some suggestions for further research:

Firstly, it is possible to do a quantitative research to reveal institutional role- and institutional event-dependent values, for some corpora give detailed information about the type of event as well as about the roles of the participants.

Secondly, if we speak of linguistic applicability, the research can further be extended to the analysis of all the contexts containing the words synonymous to *valuable* (*useful, helpful, important, rewarding* etc.), for through these adjectives one can understand the values of the academe as well.

Thirdly, one can trace and compare values across disciplines as well as across spoken and written corpora.

By doing a cross-corpus validation (see, e.g., (Lijffijt & Nevalainen, 2017), we have also shown that the research findings can be similar across corpora, which is, to some extent, can be explained by the fact that "both written and spoken genres are constituted by bundles of co-occurring features" (Bamford & Bondi, 2005, p. XY).

One more important aspect of the further research is the necessity to compare values voiced by scholars and by students.

To sum it all up, it's necessary to mention that all the studies devoted to various aspects of academic discourse are aimed at understanding the nature of this multi-layered institutionalized phenomena. And understanding between all the participants of academic discourse, as, stated in (Suleimanova, 2013), is one of the most important aspects in the academe.

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# ПРЕВРАЩАЯ СОВЕРШЕНСТВО В ИНКЛЮЗИВНОЕ: КЕЙСЫ УНИВЕРСИТЕТОВ США, ВЕЛИКОБРИТАНИИ, СИНГАПУРА, РОССИИ

## *Transforming Excellence into Inclusive: Cases from Universities in the USA, UK, Singapore and Russia*

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**Abstract.** *The article presents a semantic analysis of program documents of universities from different countries, who has leading positions in the QS-2018 ranking. The aim of this study is to provide a meaningful and semantic study of the development strategies of top universities in order to identify trends in the convergence of academic and inclusive excellence.*

*The study conducted a content analysis of plans or strategies for the development of 4 universities: Massachusetts Institute of Technology (MIT, USA), University of Oxford (UO, UK), National University of Singapore (NUS, Singapore), Lomonosov Moscow State University (MSU, Russia). The content analysis criteria were refined indicators of diversity proposed in the model for Inclusive Excellence.*

*The results showed that all program documents identify the basic values of inclusive excellence as the main ones: internationalization, activity, support, development, and others. Inclusive and academic excellence is formed in an environment where the main value and resource is the individual. Descriptors of criterions 1 and 2 are most common in the program documents of MIT and the UO. A comparative analysis of 4 documents showed that the strategy and models of inclusive and academic excellence reflect the unique track of development of the University and the country in which they are implemented.*

**Keywords:** *academic excellence, higher education, inclusive excellence, inclusive values, university.*

### **Ведение** **Introduction**

Университет в современном мире становится первостепенным игроком в глобальной системе, все больше движимой знаниями, информацией и идеями (Faust, 2010). Роль и ответственность ведущих университетов в формировании перспектив и стратегий развития общества несоизмеримо высока. «...Университеты имеют особую обязанность развивать и

исполнять глубокое человеческое желание понять себя и мир, в котором мы живем и наследуем, от мельчайшей элементарной частицы до размаха галактик» (страницу невозможно указать по причине того, что цитата взята с онлайн сервиса) (Faust, 2010).

Глобальной миссией университета становится проектирование стратегий развития общества в долгосрочной перспективе. Такие стратегии закладывают ценности высокого уровня, проектируют общество нового типа, задают форматы отношений развитого гуманного будущего. Равные возможности для всех членов общества в их бесконечном разнообразии – это образ желаемого будущего. «Разнообразие, справедливость и инклюзивность неразрывно связаны с качеством образования для наших студентов. Здоровье и жизнеспособность нашего интеллектуального сообщества зависит от тщательного и уважительного обмена различными взглядами», – написано в обосновании программы Инклюзивного Совершенства Университета Ричмонда (США) (Making Excellence Inclusive [MEI], 2019, p.2).

Целью настоящего исследования является выявление содержания и семантики конвергенции академического и инклюзивного превосходства ведущих университетов мира.

## **Обзор литературы** *Literature Review*

Несмотря на нарастающую гетерогенность студенческих сообществ, в ведущих университетах мира сохраняются серьезные барьеры для доступа, участия, академического успеха и достижения общего чувства благополучия и принадлежности значительному количеству групп студентов: представителям коренных народов, студентам из семей с низким доходом, с иммигрантским статусом, студентам из сельской местности (Bailey, 2016; Corkum, 2015; Bruk, Volosnikova & Semenovskih, 2015; Michalski, Cunningham, & Henry, 2017). Студенты из маргинализированных и обездоленных общин часто сталкиваются с расизмом и унижениями на расовой почве, дефицитом социальной и академической поддержки, социальной изоляцией, отсутствием эффективного представительства и другими формами отчуждения, дискриминации и маргинализации их университетских кампусов (Michalski, Cunningham, & Henry, 2017; Gautreaux, 2018). Исследователями установлены и описаны барьеры, ограничивающие академическую мобильность студентов с инвалидностью (Volosnikova, Fedina, Kukuev, Patrusheva, & Ogorodnova, 2019, p. 35-36).

Теория инклюзивного (включающего) совершенства (ИС) родилась в Соединенных Штатах Америки (США) и была создана Американской Ассоциацией колледжей и университетов (AAC&U). Одна из фундаментальных идей ИС заключается в том, что многообразие, инклюзивность и равноправие являются «центральными в работе по достижению академического совершенства» (Clayton-Pedersen & Musil, 2009, p. 9). В рамках ИС разнообразие и инклюзивность рассматриваются как «процесс, направленный на улучшение обучения, а не как результат» (Williams, 2005, p. iv). (В источнике именно так указаны страницы – это не ошибка) Другими словами, основополагающим для концепции инклюзивного превосходства является идея о том, что разнообразие, справедливость и инклюзивность являются неотъемлемой частью образовательного опыта и успеха (академического, социального, личного) всех студентов и высшего учебного заведения в целом (Considine, Mihalick, Mogi-Hein, Penick-Parks, & Auken, 2017).

Исследования, доказавшие существование различных явных и скрытых видов дискриминации и сегрегации в высшем образовании Канады позволили в 2017 году принять 7 принципов «инклюзивного превосходства» в рамках миссии университетов по приоритизации и продвижению ценностей инклюзивности, равенства и разнообразия в кампусах университетов и колледжей (Universities Canada Inclusive Excellence Principles [UCIEP], 2017).

Ключевыми словами, описывающими теорию инклюзивного совершенства, являются разнообразие, справедливость, равенство, поддержка, инклюзия, толерантность, процветание всех. Создание инклюзивного превосходства определяется как активный процесс, посредством которого университеты выявляют неравенство в опыте и результатах студентов, преподавателей и сотрудников, чтобы систематически устранять его и обеспечивать всем членам сообщества возможность полноценного участия в жизни учреждения (Williams, 2005, p. iv).

Процветание: когда сообщество способствует благосостоянию всех своих членов, позволяет людям полностью реализовать свой потенциал и намеренно устраняет барьеры, которые мешают им полностью реализовать свой потенциал, члены сообщества процветают. Процветание не приравнивается к счастью или комфорту; устойчивость, расширение своего потенциала, принятие решений о сбалансированной и полноценной жизни и разрешение себе потерпеть неудачу – все это измерения процветания.

Ведущие университеты мира создают различные модели, ориентированные на возможности использования инклюзивного

совершенства для развития общества, повышения качества образования, расширение компетенций выпускников. Исследование приверженности разнообразию в высшем образовании США, в котором приняли участие 236 университетов, показало, что элитные университеты в большей степени демонстрируют ценности инклюзии (Kwak, Gavril, & Ramirez, 2019).

Ключевые позиции и установки в отношении инклюзивного совершенства должны содержательно разворачиваться в базовых стратегических документах ведущих университетов. Таковым документом может стать стратегия развития университета. Она отражает все основные значимые позиции в его философии, идеологии, целях и ценностях.

### **Методология исследования** *Methodological approach*

В рамках экспериментального исследования был проведен контент-анализ стратегий развития, сформулированных и публично представленных ведущими университетами на сайтах. В исследовании проведен контент-анализ планов или стратегий развития 4-х университетов, представляющих различные страны и входящих в мировой рейтинг QS-2018: Массачусетский технологический институт (МТИ, США) – 1 место, Оксфордский университет (Великобритания) – 6 место, Национальный университет Сингапура – 15 место, Московский государственный университет им. М.В. Ломоносова (МГУ, Россия) – 95 место.

Контент-анализ проводился при помощи Istio 2007-2020 – сервиса для семантического анализа текстов. Выбранные нами документы загружались в предложенную программу, которая позволяет выделить ключевые слова, плотность ключевых слов, количество употреблений в тексте, релевантность слова, процент употребления слова среди всех значимых в тексте. Анализ также позволял выделить типичные сочетания ключевых слов – семантических единиц. В анализ мы не объединяли слова, близкие по значению. Далее слова и значимые сочетания слов распределялись по семантическим группам и были определены как дескрипторы обозначения выделенной темы.

В качестве основных анализируемых тем нами определены показатели разнообразия, предложенные в модели Инклюзивного Совершенства (Inclusive Excellence Framework [IEF], 2010), представленной AAC&U, которая имеет четыре измерения: 1. Доступность и успех, 2. Кампус, Климат и межгрупповые отношения, 3. Образование и стипендия, 4. Институциональная инфраструктура. В связи с тем, что планы и стратегии развития имеют очень обобщенный характер и рассчитаны на все направления деятельности университета, предложенные критерии были

уточнены следующим образом: 1. Доступность и успех (представленность различных субъектов университета), 2. Кампус (наличие структурных единиц университета и его окружения) Климат и межгрупповые отношения (наличие ключевых ценностей инклюзии), 3. Образование и стипендия (представленность программ, грантов), 4. Институциональная инфраструктура (представленность различных служб, институтов, фондов).

### Результаты исследования и их обсуждение *Results and discussion*

Контент-анализ Глобальной стратегии развития Массачусетского технологического института (МИТ) (Lester, 2017) позволил определить, что с точки зрения стратегии инклюзивного совершенства более значимо представлен в документе критерий 1-«Кампус. Климат и межгрупповые отношения». Иными словами, МИТ в стратегии развития ориентируется на создание комфортной среды обучения и общения как значимый фактор качества и результативности. Ключевые ценности инклюзивного общества находят широкое подтверждение в документе: решающим трендом на изменение в различных областях образования и науки на ближайший период становится интернационализация (см. таб.1). Самые распространенные словосочетания, демонстрирующие приоритеты в деятельности университета: «международная активность», «интернациональная среда», «международные студенты». Частота использования слов «поддержка», «ценности», «развитие», «индивидуальный», «делиться» свидетельствует о приверженности университета ценностям разнообразия.

*Таблица 1. Контент-анализ выраженности показателей инклюзивного совершенства в Глобальной стратегии развития Массачусетского технологического института (ядро)*

*Table 1 Content analysis of the expression of inclusive excellence indicators in the Global Strategy for MIT (core)*

Критерий инклюзивного совершенства	Слова-дескрипторы	Кол-во	Релев.	% в ядре	% в тексте
1. Кампус	факультет	177	6.11	2.2%	1.1%
Климат и межгрупповые отношения	интернациональный	276	9.52	3.4%	1.7%
	активный	93	3.21	1.1%	0.5%
	глобальный	82	2.83	1%	0.5%
2. Доступность и успех	студент	109	3.76	1.3%	0.6%
3. Образование и стипендия	программа	99	3.41	1.2%	0.6%
	образование	68	2.34	0.8%	0.4%
4. Институциональная инфраструктура	инновации	31	1.07	0.3%	0.1%

Анализ слов-дескрипторов для критерия 2-«Доступность и успех» демонстрирует самое высокое внимание к личности студента. Частота использования этого слова в документе стоит на 4 месте, в дополнение необходимо учесть, что к прямому обозначению добавляются различные роли студентов, создающих университетское сообщество (выпускники, члены, лидеры, участники).

Таким образом, можно заключить, что в первую очередь МИТ делает ставку на людей, которые растут и учатся вместе с университетом. Подобный вывод подтверждается декларацией самого университета на главной странице сайта «Мы веселые и причудливые, элитные, но не элитарные, изобретательные и артистичные, одержимые цифрами и доброжелательные к талантливым людям независимо от того, откуда они» (About MIT [AMIT], 2019).

Контент-анализ стратегического плана Оксфордского университета (Великобритания) на 2018-2023 год (University of Oxford Strategic Plan 2018–23 [UOSP], 2018) по заданным критериям (см. табл.2) также показал преобладание слов-дескрипторов, относящихся к критерию 1-«Кампус. Климат и межгрупповые отношения», как и в глобальной стратегии развития МИТ (США).

*Таблица 2. Контент-анализ выраженности показателей инклюзивного совершенства в плане Оксфордского университета на 2018-2023 год (ядро)*  
**Table 2 Content analysis of the expression of inclusive excellence indicators in the University of Oxford Strategic Plan 2018–23 (core)**

Критерий инклюзивного совершенства	Слова-дескрипторы	Кол-во	Релев.	% в ядре	% в тексте
1. Кампус	университет	43	2.66	2.6%	1.3%
Климат и межгрупповые отношения	поддержка	27	1.67	1.6%	0.8%
	студент	34	2.1	2%	1%
2. Доступность и успех	сотрудники	31	1.91	1.8%	0.9%
	образование	18	1.11	1.1%	0.5%
3. Образование и стипендия	среда	15	0.92	0.9%	0.4%
	партнерство	11	0.68	0.6%	0.3%
4. Институциональная инфраструктура					

Однако, отмечается семантическое разнообразие ключевых ценностей инклюзии: наиболее выраженным является дескриптор «поддержка» (представленность в тексте 0.8 %, в документе МИТ – 0.3%), появляются слова, характеризующие более точно, чем в документе МИТ, инклюзивную среду и климат в кампусе (включать, субъективное благополучие, поддерживать, равные возможности, равенство, инклюзия).

Одновременно, в сравнении со стратегическим видением МИТ у Оксфордского университета отмечается более узкое описание кампуса. Американский университет видит свой кампус более широко, описывает значительные связи с обществом на различных уровнях: от факультета до страны. Университет Англии – структура более замкнутая сама на себе. В то же время, в словах-дескрипторах, отнесенных нами к критерию 4-«Институциональная инфраструктура» встречается большее разнообразие возможностей для оказания помощи и поддержки всем субъектам в развитии задач университета: партнерство, инвестиции, привлекать, инвестировать, фонды. Университет явно планирует выстраивать взаимовыгодные отношения с обществом. Среди слов-дескрипторов по 3 критерию появляется слово «стипендия», напрямую указывающее об учете интересов студентов Оксфордского университета.

Проведение контент-анализа «Расширения возможностей глобальной трансформации» Национального университета Сингапура (Empowering Global Transformation [EGT], 2018) позволило выделить большее внимание административному ресурсу: среди слов-дескрипторов, обозначающих структуру университета, появляются «правительство», «министерство», а среди субъектов – «министр», «администратор». В данном случае, можно предположить, что одним из ресурсов глобальной трансформации для университета, в том числе и инклюзивной, являются официальные структуры государства (см. табл. 3).

*Таблица 3. Контент-анализ выраженности показателей инклюзивного совершенства в «Расширение возможностей глобальной трансформации» Национального университета Сингапура (ядро)*  
**Table 3 Content analysis of the expression of inclusive excellence indicators in the «EMPOWERING GLOBAL TRANSFORMATION» of National University of Singapore (core)**

Критерий инклюзивного совершенства	Слова-дескрипторы	Кол-во	Релев.	% в ядре	% в тексте
1. Кампус	школа	34	2.17	1.2%	0.7%
Климат и межгрупповые отношения	интернациональный	25	1.6	0.9%	0.5%
2. Доступность и успех	студент	44	2.81	1.6%	0.9%
3. Образование и стипендия	учение	33	2.11	1.2%	0.6%
	программа	26	1.66	0.9%	0.5%
4. Институциональная инфраструктура	innovation	31	1.07	0.3%	0.1%

Ключевым дескриптором, выделенным по критерию 3-«Образование и стипендия» оказывается «учение» как важный акцент на субъектности всего

образовательного процесса. Выделение дескрипторов для критерия 2-«Доступность и успех» позволяет заключить, что университет ориентирован на две принципиально важные области: развитие и совершенствование мастерства и лидерства (студент, мастер, лидерство, лидер, мастерство, превосходство).

Контент-анализ Программы развития Московского государственного университета имени М.В. Ломоносова до 2020 года (ПРОГРАММА развития Федерального государственного бюджетного образовательного учреждения высшего профессионального образования «Московский государственный университет имени М.В. Ломоносова» до 2020 года [PRMGU], 2012) позволяет выделить целый ряд отличительных особенностей (см. табл. 4).

*Таблица 4. Контент-анализ выраженности показателей инклюзивного совершенства в Программе развития ФГБОУ ВО «Московского государственного университета имени М.В.Ломоносова» до 2020 года*

*Table 4 Content analysis of the expression of inclusive excellence indicators in the Development programs of the Lomonosov Moscow State University, 2020*

Критерий инклюзивного совершенства	Слова-дескрипторы	Кол-во	Релев.	% в ядре	% в тексте
1. Кампус	университет	169	8.8	3.4%	2.5%
Климат и межгрупповые отношения	развитие	103	5.36	2.1%	1.5%
2. Доступность и успех	выпускник	23	1.19	0.4%	0.3%
3. Образование и стипендия	образовательный	71	3.7	1.4%	1%
	программа	65	3.38	1.3%	0.9%
	образование	48	2.5	0.9%	0.7%
4. Институциональная инфраструктура	технология	35	1.82	0.7%	0.5%

Слова-дескрипторы, отнесенные к критерию 2-«Доступность и успех» обнаруживают значительную разницу. В отличие от программных документов вузов США, Великобритании и Сингапура, где основным субъектом является «студент» и это слово входит в ядро, в Программе развития МГУ «студент» упоминается только 13 раз. Обозначение субъектов в целом очень ограничено (всего 4 на 100 наиболее распространенных слов в документе: выпускник, человек, студент, кадр). Самый популярный дескриптор «выпускник» появляется на 22 месте по частоте использования. Более подробно представлен критерий 3-«Образование и стипендия», где слова-дескрипторы, описывающие образовательный процесс отмечены в тексте наиболее плотно

(образовательный, программа, образование, академический, фундаментальный, учебный, междисциплинарный, подготовка, среда, практика, стандарт).

Семантическое наполнение критерия 1-«Кампус. Климат и межгрупповые отношения» соотносится с основными ценностями и установками других университетов на стратегию инклюзивного совершенства: развитие, международный, взаимодействие, глобальный, иностранный, мировой, поддержка, активный, мир.

Таким образом, проведенный анализ позволяет выделить ряд тенденций, которые свидетельствуют о блокировании отдельных направлений в достижении инклюзивного совершенства в перспективах развития МГУ: основное внимание уделяется процессу, а не людям; инструменты и среда университета имеет ориентиры, отличные от мировых трендов развития доступности и равных возможностей.

### **Выводы** *Conclusions*

Сравнение программных документов ведущих вузов США, Великобритании, Сингапура и России позволяет выделить стратегические направления развития высшего образования в области инклюзивного совершенства:

1. Инклюзивное и академическое превосходство формируется в той среде, где основной ценностью, ресурсом и богатством является человек.
2. Ведущие университеты мира задают базовые ценности общества доступного для всех, утверждающего ценность, неповторимость и таланты каждого человека.
3. Стратегия и модели инклюзивного и академического совершенства отражают неповторимый трек развития университета и страны, в котором они реализуются. Национальный университет Сингапура определяет перспективы трансформации в сочетании двух важных факторов: административного ресурса и развития субъектности студента. Оксфордский университет видит стратегию развития в поддержке студентов, в том числе путем привлечения инвестиций. МИТ рассматривает людей как главный ресурс для развития. МГУ планирует достичь совершенства за счет глобальных связей и открытости.

## Summary

Current research indicates that barriers to discrimination and restrictions for different groups of students (indigenous peoples, LGBT, racial and gender differences, poverty and low social status) remain in higher education.

Top universities set strategic goals for society and are a flagship for creating conditions for convergence of academic and inclusive excellence. This process will allow achieving prosperity.

This study conducted a content analysis of plans or strategies for the development of 4 universities: Massachusetts Institute of Technology (MIT, USA), University of Oxford (UO, UK), National University of Singapore (NUS), Lomonosov Moscow State University (MSU, Russia). The content analysis criteria were refined indicators of diversity proposed in the model for Inclusive Excellence, which has four dimensions: 1. Access and Success, 2. Campus Climate and Intergroup Relations, 3. Education and Scholarship, 4. Institutional Infrastructure.

The results showed that all program documents identify the basic values of inclusive excellence as the main ones: internationalization, activity, support, development, and others. Inclusive and academic excellence is formed in an environment where the main value and resource is the individual. Descriptors of criteria 1 and 2 are most common in the program documents of MIT, UO.

A comparative analysis of 4 documents showed that the strategy and models of inclusive and academic excellence reflect the unique track of development of the University and the country in which they are implemented. NUS determines the prospects for transformation in a combination of two important factors: the administrative resource and the development of the student's subjectivity. UO (UK) sees the development strategy in supporting students including by attracting investment. MIT sees people as the main resource for development. MSU plans to achieve excellence through global connections and openness.

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# METHODOLOGICAL REFLECTION ON THE HETEROCHRONIA IN THE CONTEXT OF DEVELOPMENT OF A HEALTH PRESERVING COMPETENCE OF A PHYSICAL EDUCATION TEACHER

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**Abstract.** *The article presents the methodology of using knowledge about the phenomenon of heterochronia in pedagogy. The aim of the study is to improve the methodology of development of health-saving competence of Physical Education teacher in postgraduate education based on actualization and understanding of the phenomenon of heterochronia. The use of knowledge about the phenomenon of heterochronia is considered in the context of pedagogical anthropology and conducted within the framework of phenomenological, health-saving and anthropological approaches. Approaches used in the research are the following: competence, axiological, existential, transdisciplinary, etc. Due to the use of the phenomenon of heterochronia, the temporal phenomenology of a person is represented, as well as its non-linearity, processability. Knowledge of the phenomenon of heterochronia and its value interpretations is used in the pedagogical methodology of prevention of sudden cardiac death. The use of knowledge of heterochronia promotes the effective application of Physical Education teacher the knowledge of human morphophysiology in educational practices of health preservation and axiologicalization and humanization of the educational process. The results of the conducted study determine quite considerable prevalence of knowledge as well as value and health oriented understandings of heterochronia among the working Physical Education teachers in comparison with students mastering this profession.*

**Keywords:** *axiology, coach, early learning, health preserving competence, heterochronia, methodology, Pedagogy of health, Physical Education teacher, post-graduate education, prevention, sudden cardiac death.*

## **Introduction**

The peculiarity of the cognitive (intellectual-value) component of the health preserving competence of a Physical Education teacher (Mamakina, 2013; Fedorets, 2017) lies in the fact that professional visions, thinking, cognitive schemes are aimed at preserving life and health thus determining the need to develop value based and fundamental knowledge about the nature of a person (Ancient Greek *φύσις του άνθρωπου*) (Jeger, 1997, p.15, p. 27, p. 33–35). The crucial role in the effective formation of the stated cognitive component is played by the awareness about, understanding and interpretations of the anthropological phenomena, which are systemic, comprehensive, structuring, system-organizing, border, temporal as well as alerting about possible threats to life (Fedorets, 2011) and health. One of such central and significant phenomena is heterochronia (Ananov, 1980, p. 65-123; Anohin, 1968, p. 80-82), which reflects the temporal nature of a person and everything living in a comprehensive and representative way.

In the context of using anthropological phenomena that have practical significance to develop the health preserving competence of a Physical Education teacher, we focus on the educational problematics of sudden cardiac death (Berger et al., 2004; Van Camp et al., 1995; Fedorets, 2011; Higgins & Andino, 2013; Maron & Estes, 2010; Steinvil et al., 2011; Shvaley, Sosunov, & Guski, 1992). Anthropological-value and practically oriented comprehension of the disease's phenomenology includes the study of the methodological-value problematics of the non-linear and uneven development of a child, i.e. of heterochronia, which is a biological precondition of development of the stated pathology.

Scientific pedagogical literature does not sufficiently highlight the singled-out, specified (concrete) and targeted use of the heterochronia phenomenon for the improvement of the methodology of development of the health preserving competence of a Physical Education teacher in conditions of the post-graduate education. The combination of the educational significance of the professional and competence aspects of the problem of methodological reflection on the heterochronia phenomenon and its importance for preserving children's life and health in conditions of the educational process, which have been stated above, makes our study relevant and necessary.

The aim of our research is to improve the methodology of development of the health preserving competence of a Physical Education teacher in conditions of post-graduate education on the basis of methodological-value reflection and health oriented representation of the heterochronia phenomenon as well as through temporal-ontological and onto-genetic perception of the educational problematics of sudden cardiac death prevention.

## **Theoretical Basis of the Research**

Phenomenon of heterochronia was primarily defined as a biological one, and the term itself was introduced in the 19<sup>th</sup> century. A “bright” example of heterochronia is the quickened development – acceleration. Studies of P. Anohin (1968, p. 76-109), B. Ananov (1980, p. 65-123) and others make up the foundation of heterochronia understanding that was formed within the framework of physiology, psychophysiology and psychology. Primarily, quality changes of the ontogenetic and temporal nature of a person are reflected in the unevenness of development, growth, formation as well as in the processes of involution (ageing) (Ananov, 1980, p. 66).

P. Anohin’s Theory of Functional Systems (Anohin, 1968, p. 76-109, p. 194-262; Anohin, 1998; Krivo, 2018) is a contemporary experimentally proven theory, within the framework of which the ideas of heterochronia are being actively used. It claims that knowledge, skills, abilities, traits of character, behavioral stereotypes and the personality itself are all functional systems. Competences are also viewed as functional systems. According to the System Genesis Theory of P. Anohin (Anohin, 1968, p. 80-82), heterochronia are the defining, central and system organizing conditions of functional system formation; and this should be taken into consideration both while organizing the educational process and while actually conducting a lesson.

The relevant dimension of heterochronia problematics is phenomenology of health and its preservation. Using the study of P. Anohin (Anohin, 1968, p. 76-109, p. 194-262; Anohin, 1998; Krivo, 2018), we view health as a functional system, which is being formed and exists heterochronically. The fact that a personality also forms and exists heterochronically (Ananov, 1980, p. 65-123) indicates the “comprehensiveness” of heterochronia and their systemic character. As B. Ananov puts it, “...the start of the personality happens much later than the start of a person” (Ananov, 1980, p. 67).

Studies that reveal the phenomenology of heterochronia lie primarily in the fields of biology, physiology, psychophysiology, defectology, medicine and psychology. In pedagogics the stated topic has not been thoroughly studied yet. That is why the domineering understandings of a person (a child) and the processes of his/her development, including the formation of knowledge, skills, abilities, competences are often being developed on the basis of “simplified”, lineal and deterministic ideas in which the non-lineal, uneven and temporal human nature is not fully taken into consideration

## **Methods of the Research**

In this research, we use the theoretical analysis of the scientific sources as well as a system of approaches, which includes competence (Raven, Yarygin, & Korostelev, 2017), health preserving (Fedorets, 2011, 2017; Fedorets & Klochko, 2019), axiological, hermeneutical, phenomenological (Gusserl, 2004), ontological, reflexive, existential (Binswanger, 1942), systemic (Bertalanffy, 2009), target, anthropological (Bertalanffy, 2009; Bollnow, 1971; Ushinskij, 2005), holistic, problematic, transdisciplinary approaches.

We applied methodologies of such scientific fields as existential philosophy; bio-semiotics (Millikan, 1984; Knyazeva, 2018), phenomenological philosophy (Gusserl, 2004); pedagogical anthropology (Bollnow, 1971; Ushinskij, 2005) and philosophical anthropology. We used the concepts of knowledge transfer (Nonaka & Takeuchi, 2011); personal knowledge (Polani, 1985); functional systems (Anohin, 1968, 1998; Krivo, 2018); anthropologization (Bollnow, 1971; Ushinskij, 2004). On the basis of epistemological operations of extrapolation, analysis, problematization and using the hermeneutical approach to define the educational phenomenology of risks of sudden cardiac death development, we provided value and health preservation based interpretations of the results of morphological, neuro-physiological, neuro-morphological (Shvalev et al., 1992) and clinical cardiac studies.

We have actualized the methodological-worldview and methodological-value potentials of Elin concepts of “human nature” (Ancient Greek *φύσις του ανθρώπου*) (Jeger, 1997, p. 15, p. 27, p. 33–35); isomerism (Ancient Greek *τιμωρία*) – harmonious, balanced and proportional correlations between the components of a person and between a human being and the surrounding world (Jeger, 1997, p. 15); “harmony” or “mixing” (Ancient Greek *κρασις*) (Jeger, 1997, p. 15); sense of moderation (Ancient Greek *σύμμετρον μέτριον*) (Jeger, 1997, p. 44–45); *kalokagathia* (Ancient Greek *καλοκαγαθία*) – combination of beauty and harmony with goodness as well as the merging (integration) field of corporal and spiritual (Jeger, 1997, p. 45); the care of the self (*epimelēsthai sautou*) described by M. Fuko (Fuko, 2008).

For this particular research, we have developed and used a Fedorets-Klochko questionnaire entitled “Determining heterochronically oriented interpretation of health preservation” that we present below:

- 1. At the body level, ontogenetic and morpho-physiological sudden cardiac death risk factors in children while doing physical exercise are:*
  - 1) uneven body development;
  - 2) insufficient training level of a child;
  - 3) lack of vitamins (correct answer – 1).
- 2. At the cardiac level ontogenetic and morpho-physiological sudden cardiac death risk factors in children while doing physical exercise are:*

- 1) lack of heart nutrition; 2) uneven development of the heart; 3) insufficient training level of the heart (correct answer – 2)
3. *Rapid growth of a child, which is accompanied by body mass growth indicates the necessity:* 1) not to introduce changes in the training routine; 2) to increase the exercise load while doing sports and exercising; 3) to decrease the exercise load while doing sports and exercising (correct answer – 3).
4. *Even growth and development of a child are indicators of:* 1) health; 2) such phenomenon is impossible; 3) harmonious development (correct answer – 2).
5. *Uneven growth and development of a child are indicators of:* 1) giftedness or normative development; 2) a slight individual development disorder; 3) a significant individual development disorder (correct answer – 1).
6. *Uneven growth and development of a child are indicators of:* 1) health; 2) health disorders; 3) improper physical activity load and nutrition (correct answer – 1);
7. *Normative for a teenager is that cardiac development:* 1) is faster than body growth; 2) is correlated with body development; 3) is slower than body growth (correct answer – 3);
8. *Normally, the formation of the emotional sphere of a child:* 1) is faster than cognitive development; 2) is slower than cognitive development; 3) is synchronized with cognitive development (correct answer – 1)
9. *Uneven growth, maturing and formation of a child's body is:* 1) a pathology; 2) normative; 3) a slight disorder (correct answer – 2)
10. *If a child develops unevenly, you should:* 1) visit a doctor and a psychologist; 2) consider it to be a peculiarity of a child's development; 3) to correct it with sport and healthy nutrition (correct answer – 2);
11. *Presence of slight and typical problems with cardiac health in teenagers, which pass with age, is caused by:* 1) insufficient training level; 2) peculiarities of individual development, which is uneven; 3) insufficient overall body hardening (correct answer – 2).
12. *Presence in teenagers of relatively compensated behavioral and character problems, which do not lead to stable social maladjustment and which pass with age, is caused by:* 1) bad upbringing; 2) unevenness of ontogenesis; 3) hereditary factors (correct answer – 2).
13. *Hypersexual behavior of teenagers, which is compensated and does not lead to social maladjustment, is primarily caused by:* 1) bad upbringing; 2) typical peculiarities of individual development; 3) enhanced nutrition (correct answer – 2).

14. Aggressive behavior of teenagers, which does not lead to social maladjustment, is primarily caused by: 1) bad upbringing; 2) peculiarities of individual development; 3) lack of vitamins in the food (correct answer – 2).

### **Research results**

Let us look at the phenomenon of heterochronia within the methodological-value and content-sensual frames of an image of a person, temporality and values, sudden cardiac death prevention (Berger et al., 2004; Van Camp et al., 1995; Fedorets, 2011; Higgins & Andino, 2013; Maron & Estes, 2010; Steinvil et al., 2011; Shvaley et al., 1992) and methodical work.

*An image of a person and Homo Heterochronicum.* From the methodological-worldview positions, an image of a person is a primary and system organizing factor both of the health preserving activity of a teacher and of the overall organization of the educational process. Everyone is familiar with images-concepts of Homo Sapiens (a clever person), Homo Educandus (a studying person), Homo Ethicus (an ethical person) and others, which contain the emotionally defined and representatively reflected essential features of a person. An image of a person is among the primary ones in religious and cultural traditions.

The concept of an image of a person and the inseparable deep, spiritual, existential and anthropological values and senses may be considered to be the source of humane and its attributive phenomena. Human ontology (being), axiology, vitality, humanism, mercy, love, wholeness, intentionality, temporality, idea of health and essence of a human being are all “concentrated”, reflected and manifested in the image of a person. The issue of an image of a person in its anthropological and humanistic interpretation becomes especially significant nowadays, when an image of a person as a spiritual being capable of transcendence and value-sensible existence is reduced to a simplified “image of a person as a robot” as the author of the “general systems theory” (allgemeine Systemlehre) L. Bertalanffy (Bertalanffy, 2009, p. 191) points out.

Using K. Levin’s (Levin, 2000) concept of psychological field in our methodological reflections, we may say that by its very existence, the image of a person a priori conveys, defines and forms high humanistic, humane and merciful values and senses. By perceiving and actualizing the value-sensible and ontological dimensions of an image of a person in conditions of an educational process, we may determine and unveil in a Physical Educational teacher such features as humanism, tolerance, kindness, mercy, love, compassion. So speak of the necessity to actualize the system of co-dependent and inter-related qualities, that an educator needs in order to effectively preserve health and life of children

the stated qualities are at the same time attributive to the person and are directly linked to the image of a person. Special value of the image of a person lies in the fact that it forms complex perception and understanding of a person by the person him/herself and by the participants of the educational process.

Taking into consideration of the above presented ontological, moral-ethical, value, temporal and activity understandings of the image of a person, we supplement it with the practically oriented concept of Homo Heterochronicum. Methodological sense of the stated concept is to show the teacher the temporal nature of a person and the unevenness of ontogenesis represented as heterochronia. Consequently, heterochronia is presented as a significant peculiarity of human existence as well as a specific value, a relevant and potential sense, a mode of existence, a way of adaptation and representation, a morpho-physiological and systemic precondition of learning and a manifestation of life and creative life. With the help of this concept the non-linear, multi-dimensional, polyontological, auto-poetic (meaning the ability to self-form, self-develop, self-improve) nature of a person (Maturana & Varela, 2000) are represented.

Let us consider the phenomenology of heterochronia using the methodological and axiological potential of Hellenistic concepts. Correspondingly, “human nature” (Ancient Greek *φύσις του ανθρώπου*) (Jeger, 1997, p.15, p. 27, p. 33–35); isomerism (Ancient Greek *τιμωρία*) (Jeger, 1997, p. 15); kalokagathia (Ancient Greek *καλοκαγαθία*) (Jeger, 1997, p. 45) are manifested through Homo Heterochronicum. Despite the fact that heterochronia is an unevenness, it first and foremost is a way of a person’s harmonization in ontogenesis and explains the peculiarity of “unveiling” his/her temporality.

*Temporality and heterochronic values.* On the basis of bio-semantic (Millikan, 1984; Knyazeva, 2018), ontological, existential, temporal and axiological perceptions of the phenomenon of heterochronia, we form a methodological concept of *heterochronic values*. We define the stated values as such in which non-equilibrium, uneven, processual, temporal, existential, complex, non-linear, auto-poetic and poly-ontological nature of a person is disclosed in the form of heterochronia, the value interpretation of which is aimed at preservation of health, life and at facilitation of creative life.

From the existential positions (Binswanger, 1942), heterochronic values are an interpretation of existential senses and existentials of space, time and care, as well as their representation in the “visual” life as well as “corporal” and psychological format. Thus, the existence “speaks” in the “visual” format through heterochronia. For example, a person sees and understands that he/she grows or gets older, and this has a deep existential sense.

The heterochronic values integratively present and interpret vitally and with the orientation towards creative life the phenomenology of the image of a person as Homo Heterochronicum, as life and as “human nature”(Ancient Greek *φύσις*

του άνθρωπου) (Jeger, 1997, p. 15, p. 27, p. 33–35). Heterochronic values include phenomena of various nature: structure and functions of the body, psychological peculiarities, certain period of life etc.

The immaturity of the cardiac nervous system in children under the age of seven (Shvalev et al., 1992), which determines both the age peculiarities of motor activity of children and the possible risks and threats for their life and health, may serve as an example of heterochronic values. Another example is when we speak about adolescence, we voice the heterochronic value and specifics with dominating temporal and vital connotations. The sense of development of the concept of heterochronic values lies in the need to form a delicate, tolerant, merciful, kind, sensible attitude of a teacher towards children, which would be based on the value interpretation of their age, ontological, onto-genetic and temporal peculiarities.

Human temporality, procedurality and existentiality are represented in heterochronic values. Actualization of the temporal nature of a person, unveiled through the value reflection on heterochronia is important as values very often concern special and substantial aspects. This is caused by the fact that domineering understandings and concepts in the European culture are related to spatial phenomena, which can be “easily” represented and formalized. At the same time, temporal phenomena that are reflected in heterochronia have not been sufficiently actualized neither in the professional culture of an educator, nor in the educational theory or in health preserving practices. The development of the concept of heterochronic values is aimed at increasing the efficiency of life and health preservation based on the anthropological-value and existential perception of an image of a person, the human nature and disclosure of a person’s temporality, uneven ontogenesis and temporal ontology.

*Sudden cardiac death prevention based on the awareness of the heterochronia phenomenon.* Sudden cardiac death, a pathology, the risks of which considerably increase while doing sports and physical exercises. That is why, in his/her professional activity, a Physical Education teacher and a coach has to deal with the issue of primary importance, i.e. with sudden cardiac death prevention (Fedorets, 2011) as well as with prevention of other acute and life and health endangering pathologies that include child injury (DiFiori et al., 2014; Gottschalk & Andrish, 2011), concussion (Powell, 2001) and other disorders.

In order to effectively preserve health, a teacher should see and understand a child, perceiving him/her as a reality, as existence, as temporality, as heterochronia, as a phenomenon. In this context, it is important to “return” to things, to the living world (Germ. Lebenswelt), to existence described by E. Husserl, the founder of phenomenological philosophy (Gusserl, 2014, p. 193-200). By interpreting Husserl’s ideas, we transform them into methodological stratagems – “Return to the Person”, “Return to the Child”, to its nature, to its

temporality, to its ontogenesis (individual development), to its heterochronia. The sense of this approach is the need to form a value-based understanding of the uniqueness of every child's existence in the teacher, taking into consideration the comprehension of anthropological phenomena, in this case of heterochronia.

The idea of this paper is sudden cardiac death prevention in children at Physical Education lessons and while doing sports, using the methodological-value reflections and technological and health oriented perception of the phenomenon of heterochronia. A lot of works study sudden cardiac death (Berger et al., 2004; Higgins & Andino, 2013; Maron & Estes, 2010; Van Camp et al., 1995; Steinvil et al., 2011). Academician V. Shvaliov and his scientific school (Shvalev et al., 1992) as well as others have significantly contributed to the understanding of the mechanisms and causes of sudden cardiac death. A Sudden Cardiac Arrest Association [SCAA] operates in the USA and its work is directly aimed at sudden cardiac death study and prevention.

V. Shvaliov (Shvalev et al., 1992) studied that one of the leading morpho-functional reasons of sudden cardiac death is the disorder in the nervous mechanism of cardiac work regulation. The stated regulation mechanisms structurally presented by the cardiac nervous apparatus, which provides a "sophisticated", differentiated adaptation of the heart to various loads. Thus, accordingly to the load the heart forms its optimal working modes that ensure proper blood circulation in the body.

A significant fundamental and at the same time practically oriented idea formed in the course of V. Shvaliov (Shvalev et al., 1992) and his scientific school's studies is that the presence of structural or/and functional disorders in the cardiac nervous apparatus or its involution or immaturity create systemic risks, which facilitate sudden cardiac death occurrence. That is why, for a professionally organized, conscious and targeted sudden cardiac death prevention it is very important to have the system organizing awareness about the fact that cardiac nervous apparatus is formed and destroyed correspondingly to age changes, i.e. heterochronically.

Following the methodological visions, taking into consideration clinical phenomenology of sudden cardiac death and analyzing the works of V. Shvaliov and his scientific school (Shvalev et al., 1992), we may define such main stages of cardiac nervous apparatus maturing and involution as: 1<sup>st</sup> (since birth until 8 months) – a significant structural and functional immaturity that makes this period the riskiest in terms of pathology development that caused the need to define a specific nosology – the sudden infant death syndrome (Lat. mors subita infantum); 2<sup>nd</sup> stage (7 years old) – partial structural maturity accompanied by the formation of main structures of the nervous apparatus; 3<sup>rd</sup> stage (11-13 years) – incomplete structural and functional maturity at the age of 11-13 years; 4<sup>th</sup> stage (18-22 years) – complete structural and functional maturity; 5<sup>th</sup> stage (after 33) – slow

and insignificant involution; 6<sup>th</sup> (after the age of 40-42) – involution and age-related destruction of the nervous apparatus.

Extrapolating the above presented morpho-physiological phenomena, which are determined by ontogenesis, on the educational problematics of preserving children's life and health, we may point out that immaturity of the cardiac nervous apparatus is a risk factor in sudden cardiac death development. Certain factors, among which physical load is a crucial one, especially if it does not correspond with functional abilities of a child and his/her age peculiarities, in combination with the structural-functional immaturity of the cardiac nervous apparatus, may considerably increase the risk of sudden cardiac death.

The conclusion from the above presented age-related cardiac morpho-physiology and the issue of sudden cardiac death that would be of practical and methodological value for a Physical Education teacher and a sports coach lies in the need to use the value oriented awareness about the “heterochronia of the heart”, which are presented in the form of stages of cardiac nervous apparatus maturity at the age of 8 months and 7, 12, 18, 22 years. To preserve their own health while performing professional functions, coaches should also take into consideration such age milestones as the age of 33 and 40 years. The key morpho-physiological peculiarity is the heterochronia of the cardiac nervous apparatus at the age of 22, which manifests itself in different speed of the growth of nervous structures and the myocardium (cardiac muscle) formation.

From the point of cardiac health preservation in pupils during physical load, awareness about another “cardiac heterochronia”, which occurs in adolescence and lies in the slower myocardium (cardiac muscle) growth in comparison with the speed of muscular-skeletal development, would be important for a Physical Education teacher and coach. These two stated cardiac heterochronia are also presented in our methodological system as heterochronic values that make the stated awareness about the non-lineal nature of heart and its nervous apparatus development a value, phenomenologically, temporally, existentially and health oriented one.

Applying the stated understanding of heterochronia and actualization of heterochronic values and the Homo Heterochronicum concept facilitates the affective practical and personalized orientation as well as specification (concretization) of perception and interpretation of the uneven and non-lineal body development. Accordingly, they transform into personal knowledge (Polani, 1985) and are included into the structure of the cognitive component of the health preserving competence of a Physical Education teacher.

*The development of value oriented understandings of the heterochronic peculiarity of a person in a Physical Education teacher.* The ideas and strategies of anthropologization, professionalization, axiologization, phenomenologization, which include the awareness about and the interpretation of heterochronia,

actualization of heterochronic values and the heterochronic image of a person (Homo Heterochronicum), form the basis of improving the health preserving competence of a Physical Education teacher in conditions of post-graduate education. According to the competence paradigm ideology (Raven, Yarygin, & Korostelev, 2017) and the health preserving intentions and mindset, we draw attention to the fact that value-based attitudes, orientations and strategies of a teacher, aimed at harmonization of a child's existence taking into consideration heterochronia, are significant for health preservation.

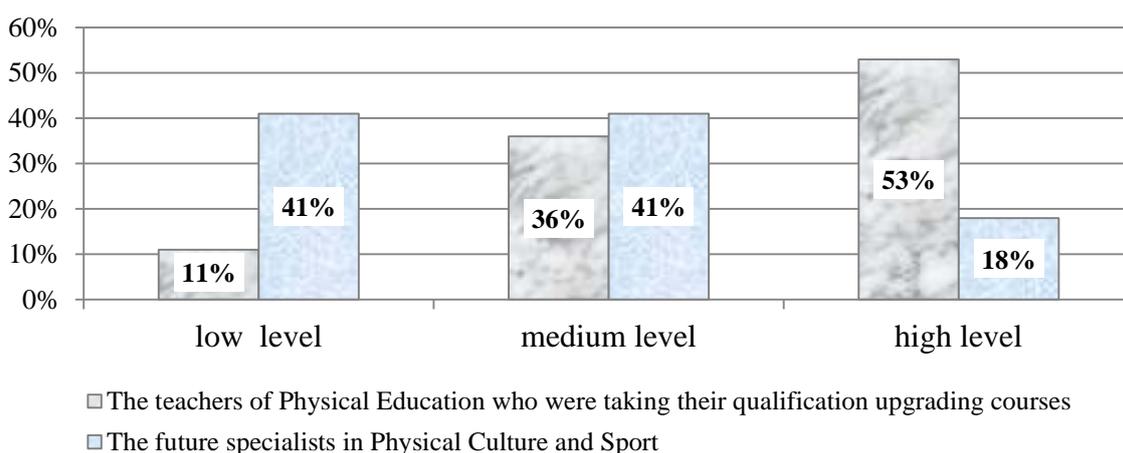
We unveil the stated strategies using the Elin concepts. Thus, we single out *heterochronia harmonization strategies*, which include: *the care of self* (epimelēsthai sautou) (Fuko, 2008), which is also interpreted as existential care about the pupils and harmonization of their heterochronia; the sense of moderation in pedagogical influences and actions (Ancient Greek σύμμετρον μέτρον) (Jeger, 1997, p. 44-45); *facilitating correlation or isomerism* (Ancient Greek τιμωρία), which is aimed at forming harmonization, correlation and congruence between a person (a child) and the environment and situations as well as self-harmonization of a child.

In 2017-2019 we conducted a research in order to comprehend the practical significance of the issue of heterochronia in improving the health preserving competence of a Physical Education teacher. The research was conducted in: the Drohobych Ivan Franko State Pedagogical University – 15 people (future specialists in Physical Culture and Sport), 26 people (teachers of Physical Education who were taking their qualification upgrading courses); Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University – 7 people (future specialists in Physical Culture and Sport); Vinnytsia Humanitarian Pedagogical College – 48 people (future specialists in Physical Culture and Sport); T.H. Shevchenko National University “Chernihiv Collegium” – 11 people (future specialists in Physical Culture and Sport); K.D. Ushynskyi Chernihiv Oblast Institute of Post-Graduate Pedagogical Education – 24 people (teachers of Physical Education who were taking their qualification upgrading courses); Mykolayiv Oblast Institute of Post-Graduate Pedagogical Education – 18 people (teachers of Physical Education who were taking their qualification upgrading courses). The Questionnaire entitled “Determining heterochronically oriented interpretation of health preservation” (presented above in “Methods of the Research”) was used in the research. In the course of the research we compared the value oriented awareness of the heterochronia phenomenon among the teachers of Physical Education who were taking their qualification upgrading courses (68 people) and the future specialists in Physical Culture and Sport (81 people). 53% of the teachers who were taking their qualification upgrading courses demonstrated high level of knowledge, 36% - medium and 11% - low. As for the future specialists in Physical Culture and Sport, 18% demonstrated high

level of knowledge, 41% - medium and 41% - low (Fig.1). Thus, if compared with future specialists in Physical Culture and Sport, teachers of Physical Education who were taking their qualification upgrading courses demonstrated a considerably higher level of value oriented knowledge about the heterochronia phenomenon.

Heterochronia is a biological and existential phenomenon that reflects the uneven, nonequilibrium, nonlinear, stage growth and formation of a person and the temporal specificity of the development of his knowledge, skills, competences, functional and adaptive capacities.

The updating of knowledge and interpretations of the phenomenon of heterochrony to improve the health-saving competence of Physical Education teacher is carried out in accordance with established traditions of pedagogical anthropology, ideas of humanization of the educational process, as well as within the phenomenological, natural, ontological, problematic, age-related and health-based approaches.



**Figure 1** *The value oriented awareness of the heterochronia phenomenon among the teachers of Physical Education who were taking their qualification upgrading courses and the future specialists in Physical Culture and Sport*

The need for the use and significance and value of application in the pedagogical theory and practice of knowledge of heterochrony is determined by many aspects, they: promote the development in a Physical Education teacher of a modern science-based, objectified, humanistic, phenomenological, and existential conception of the human being as a polyontological and multidimensional being, which has its own special path of development and existence; change the reduction, mechanistic conceptions of the person into the personality oriented, phenomenological, temporal and existential; open ways of effective application of differentiated, health-saving, innovative, creative and

personality-oriented approaches at a new qualitative level, because they give an opportunity to visually see and understand the deep anthropo biological mechanisms of development and development of both human and individual functions, knowledge, competences; present to the teacher a procedural, dynamic and temporal vision of the person as opposed to the traditional “object”, that is, they give an understanding of “man as time”, “man as process”; visually reveal the stages of human development and determine a practically oriented understanding of sensitive and crisis age periods, deepening the special knowledge about them; form a teacher's understanding of their limits of influence on the child and contribute to the formation of a tolerant and caring attitude towards the person; is an epistemological condition not formal but meaningful and phenomenologically oriented health care, education and upbringing.

In support for this, we give examples of heterochrony relevant to the educational process: crisis and sensitive periods; memory is a leading mental function in children under the age of six, which some understand as developed intelligence and giftedness; lack of attention in 5-6 year old children makes it futile to try to train it at that age; immaturity of the musculoskeletal system in 5-6 years with prolonged sitting in the conditions of early learning is a prerequisite for the development of scoliosis and slouch; the formation of knowledge, skills, competencies always passes with certain mistakes and difficulties that cannot be (and should not be avoided), which reflects the heterochronous specificity of the person and with which one must consciously, tolerantly and balanced work. Heterochrony largely determines the incompleteness of a person and the openness of his being, which represents the ontological premise of his humanism, tolerance, creativity, transcendence and commitment to self-improvement, actualization and spirituality.

In the process of improving the health care competence of a Physical Education teacher in postgraduate education, we actively use the knowledge of heterochrony and actualize the need for the teacher to develop intellectual skills in the direction of heterochronically oriented interpretations of professionally significant phenomena and problems. This contributes to the humanization and axiologicalization of the educational process, the faster and effective assimilation of knowledge about the person and his health and motor sphere. Accordingly, professional and practical orientation and specification of knowledge about the person and his health and improvement on the basis of their health care competence. In educational theory and practice, knowledge of heterochrony is complementary, not competitive. They give the opportunity to open in front of the teacher in a representative, phenomenological, temporal and value-oriented way, to reveal the nature of man, which in comparison with other biological species is formed unevenly and long time.

Here are some important heterochrones, the knowledge about them we use to improve the health-care competency of a Physical Education teacher: due to the uneven growth in adolescence during puberty, the coordination opportunities that need to be taken into account for prevention are temporarily impaired; in children, the temporal and pelvic bones are not monolithic until 10-12 years of age, which requires special care when conducting Physical Education classes; The psychological problems of adolescents in the form of addictive, hypersexual, aggressive behavior or the development of accentuation of character are largely due to their uneven growth and formation, which requires the teacher's care, attention and purposeful psychological work. On the basis of these phenomena, we have developed the methodological recommendations on the technologies for working with them.

### **Conclusions**

In order to improve the methodology and methods of health preserving competence of Physical Education teacher in conditions of post-graduate education on the basis of unveiling temporal ontology of a person and perception of his/her uneven and non-linear ontogenesis, we have actualized the educationally significant and health oriented problematics – the methodological reflection of the heterochronia phenomenon. On the basis of methodological-value reflection of the heterochronia phenomenon, which reflects the temporal phenomenology of a person, its non-linear, procedural, poly-ontological, existential, harmonic, vital, auto-poetic, crisis and borderline nature, we have formed the practically oriented concepts of Homo Heterochronicum and heterochronic values.

The idea and the methodological and technical sense of development of the stated concepts is the professionalization, existentialization, anthropologization, humanization, axiologization, technologization and intellectualization of the process of improving the health preserving competence of a Physical Education teacher in conditions of post-graduate education as well as increasing the efficiency of educational practices and life and health preserving techniques. The concepts of Homo Heterochronicum and of heterochronic values are aimed at development in a Physical Education teacher of a health oriented, tolerant, merciful, kind, attentive, humane, responsible and delicate attitude to children that would be based on the awareness and value-based understanding of heterochronia as a manifestation of a temporal nature of a person and the staged and non-linear peculiarity of a person's ontogenesis.

We fill the concept of heterochronia, which exists in physiology and biology, with pedagogical, life preserving, health preserving, technological and value-based senses. In this pedagogical system heterochronia are defined as “cognitive-

interpretative-value-temporal” concepts, which are formed by the following components: awareness about and understanding of the anthropological phenomenon, which is important for life and health preservation; the temporal component, which determines the significant time and its limits; value interpretations of the biological and psychological phenomenon; understandings and visions, which unveil the attitude and the importance of the stated phenomenon for life and health preservation.

Based on the transfer of medical knowledge with the aim of targeted, proof-based, objectivized, technologized, intellectualized, nature-corresponding and value oriented prevention of sudden cardiac death at Physical Education lessons and while doing sports, we determine three “cardiac heterochronia”: “partial structural maturity of the cardiac nervous apparatus at the age of 7”, “incomplete structural-functional maturity of the cardiac nervous apparatus at the age of 11-13” and “complete structural-functional maturity of the cardiac nervous apparatus at the age of 18-22”.

We represent the awareness and value understanding of cardiac heterochronia as significant components of the methodological foundation of improving the health preserving competence as well as motor practices and techniques. The stated cardiac heterochronia provide value-based orientation and methodological determination of significant and systemic peculiarities of pedagogical health preserving and life preserving strategies, tactics, actions, cognitive schemes, visions, conditions and the specifics of the professional thinking of the Physical Education teacher (coach).

As the result of the conducted studies using the questionnaire entitled “Determining heterochronically oriented interpretation of health preservation”, we have determined that the working Physical Education teachers show better awareness about and value oriented understandings of heterochronia in comparison with students majoring in Physical Education. We believe that the reflection of one’s own experience, conducted by a Physical Education teacher, facilitates the educator’s understanding of the temporal phenomenology of a person and his/her health, which also includes actualization of understandings concerning the significance and systemic nature of heterochronia.

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## METHODS FOR EVALUATING THE USE OF DIFFERENT APPROACHES OF ORGANIZING THE PROCESS OF TEACHING STUDENTS

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**Abstract.** Control over any process of human activity is carried out by evaluating its result. In the field of education, the goal is, as a rule, to check the effectiveness of one or another pedagogical approach to solving the set task. For this purpose, a pedagogical experiment is planned and carried out. First, the analysis of the problem is carried out and the participants of the experiment are determined, control and experimental groups of approximately equal number and level of preparedness are formed. Further, the researched pedagogical approach is implemented, the results obtained are studied and evaluated, and conclusions are drawn. Research was conducted at the Department of Software Engineering and involved its students, as well as teachers of Riga Technical University and Baltic International Academy. Authors have studied the impact of introducing extended course content, interdisciplinary communications and feedback in teacher-student interaction. Computer training systems, a semantic network, and statistical analysis were used as assessment methods. Research aim of this article offers an overview of methods of assessing quality of education and their comparison in order to select the best one for conducting a pedagogical experiment, which were used in Riga Technical University.

**Keywords:** educational process, learning quality assessment methods, pedagogical experiment.

### Introduction

Education is one of the most important steps towards sustainable development, ensuring economic growth and social stability. Innovation activity and new production technologies are the key to quality education. However, accelerating the pace of technology updates leads to the need to introduce new forms and methods of teaching, as well as a new approach to the learning process.

Due to the increasing pace of scientific and technological progress, there is a continuous increase in the volume and change in the content of knowledge and skills that modern specialists should possess, as a result of which the requirements for the quality of their training increase. However, the mismatch between the possibilities of traditional teaching methods and the amount of factual knowledge that modern society requires from the graduates of educational institutions indicates a problem in the system of modern higher education. Therefore, the issues of computer training and knowledge control are of interest of many scientists, both teachers and specialists in the field of information technology.

With the introduction of new educational standards (Statement of the Third Bologna Policy Forum, 2012), ensuring the interconnection of fundamental and practical training, technical universities need to update the content, forms, methods and teaching tools, as well as ensure control over the quality of education. In this context, the quality management of vocational education in a university should be considered as a single process of quality assurance, quality control and continuous improvement of applied teaching methods.

In the field of education to check the effectiveness of a pedagogical approach in solving the set task an experiment is planned and carried out. First of all, it is needed to analyse the problem and identify the participants of the experiment. Then it is necessary to form control and experimental groups of approximately equal numbers and levels of preparedness. Further, the researched pedagogical approach is implemented, the results obtained are studied and evaluated, and finally, conclusions are drawn.

There are a large number of different approaches to the organization of training and knowledge control, each of them has its advantages and disadvantages (Li & Xiong, 2016), (Zhang, Fan, Fang, Chen, & Wang, 2018), (Zhao & Zhang, 2018).

The aim of this study is to present authors own practice and by using methods of assessing quality of education and their comparison which were used in Riga Technical University (RTU), select the best one for conducting a pedagogical experiment.

### **Overview of the methods used in the Department of Software Engineering**

The academic staff of the Department of Software Engineering constantly analyses, improves and updates the content and forms of methods and tools for teaching students of RTU. There are many ways to evaluate the results of pedagogical experiments. To do this, it is necessary to organize the collection of statistical data, to develop methods for their analysis.

The main way to assess the impact of different approaches to the organization of the student learning process is the statistical processing of data

using specific statistical methods. Statistical analysis allows you to identify the presence of the effect of a method used in learning, as well as to investigate the influence of the studied factor depending on its level. Using statistical analysis at the Department of “Software Engineering” of the RTU, we analysed the impact of computer-based learning and knowledge control systems such as Learning Management System (LMS), Intelligent Knowledge Assessment System (IKAS) and the electronic portal ORTUS on student performance (Prokofjeva, Zagulova, Katalnikova, & Synytsya, 2018).

In the modern educational process, the role of students' independent work is increasing. Therefore, the urgent issue is the organization of students' independent work and the formation of skills of such work (Rupšienė & Mažionienė, 2011). In this case, one of the difficult questions becomes the motivation of students, since self-study requires an active attitude of the student to the assimilation of new knowledge, that is, self-motivation. Therefore, students in the learning process were given the opportunity of their own free will to choose to use LMS and ORTUS systems or not.

An analysis of the results of academic performance and different approaches to organizing the learning process using LMS and ORTUS systems allowed authors to assess the possibilities of using these systems for self-study and self-control of knowledge in a situation where their mandatory use is not declared in the presence and absence of motivation. To analyse the data, authors used correlation and one-way analysis of variance (ANOVA) followed by a posteriori analysis using the Tukey method for unequal groups (Tukey HSD for unequal N). At the same time, it was shown that students, who independently, of their own free will, without additional incentives, fully used the computer-based learning system and the knowledge control system, had better academic performance in the subject. As a motivating factor, the mark obtained in the tests was taken into account when receiving the final mark for the exam. That is, such an approach can contribute to the formation of self-study skills, which are so necessary for adaptation in the modern world.

Another approach was used by the authors in (Katalnikova, Novickis, & Prokofyeva, 2016), (Katalnikova, Novickis, Prokofjeva, & Schumann, 2017). Several study courses were supplemented with new content elements. During the experiment, the question arose of how to assess the quality of the course, the success of its modifications, when both the course content and teaching methods were changed, using not only experimental but also mathematical methods. It was decided to try to use such a tool as a semantic network, i.e., the task of assessing the quality of the training course was considered as the task of assessing the complexity of the semantic network displaying this course using the graph metrics such as height, edge density and diameter of the graph corresponding to this network. Unfortunately, this experience was unsuccessful. The authors did not

succeed in obtaining a stable, reliable result; therefore, the authors used other methods in their further studies.

The Department of “Software Engineering” conducts classes on the study of programming, not only for computer scientists, but also for chemists, electricians, and mechatronics. The article “Structurization of courses at studying disciplines of programming” (Prokofjeva, Uhanova, Zavjalova, & Katalnikova, 2015) proposed a methodology for structuring learning courses “Computer Learning” and “Programming Languages” for students of these professions. The courses provide not only the organization of practical work on the computer, but also familiarization of students with the principles of algorithmization of computing processes and technology for creating application programs. Traditionally each study course consists of three main components: theoretical part, laboratory–practical part and evaluation part. All these parts are obligatory and traditionally are taught in the higher education institutions. The authors of the article hypothesized that a balanced supplementing of courses with new content elements should significantly increase student performance, as well as the quality of training in these disciplines. To prove or disprove the hypothesis, an experiment was conducted at the faculty and statistics for five academic years were collected. All students are divided into two main groups: students who studied according to the traditional methodology and students whose training and knowledge testing was carried out according to the proposed methodology. The technology for assessing the quality of student training is based on taking into account the results of various educational and control works during a certain period of study. The grades obtained are generalized indicators of the quality of training. They allow to analyse the quality of education of individual students and academic groups (Grigorash & Trubilin, 2013). The coefficients for assessing the quality of students' learning in the disciplines “Programming Languages” and “Computer Education” were determined. The results show that when teaching students according to the traditional scheme, the coefficient of assessing the quality of students' training is significantly lower than when applying the advanced teaching methods of these disciplines. Thus, a balanced addition of new substantive elements to the courses not only improves student performance, but also significantly improves the quality of training and knowledge control, which is an urgent task for the engineers in the formation of those skills and abilities that they will use in their future professional activities.

The higher education system is primarily aimed at ensuring high-quality education through the formation of competence in specialists. In the article “Some Aspects of Students' Professional Competence Formation on the Basis of Implementation of Interdisciplinary Links” (Prokofyeva, Katalnikova, & Boltunova, 2019), the authors describe the possibilities of applying an interdisciplinary approach to the preparation of students of higher education

institutions, allowing them to maximize the knowledge gained in previous disciplines and to orient in related areas of future professional activity. The preconditions for the application of such an approach are identified and the ways of implementing an interdisciplinary approach are considered, also its effect on increasing student results is shown. A pedagogical experiment was also conducted, where the coefficient of assessing the quality of student training was used. The results of the experiment convincingly show that the implementation of interdisciplinary links in the process of teaching students really motivates students and contributes to the improvement of the quality of education.

In the work “Feedback Method In Teacher-Student Interaction” (Prokofyeva, Zavjalova, & Boltunova, 2019), the authors consider control as a mandatory component of the learning process, which is carried out at all stages of the educational work, provides feedback “teacher-student” and serves as the basis for improving the quality of training. Since the modern educational process is too formalized, the presence of feedback takes into account the characteristics of students, which allows to develop a personal approach and effectively organize learning sessions. It also contributes to the development of skills for self-educational and professional activities. Stable contact between the teacher and the student affects the formation of the value system of the future specialist and, in turn, determines the professional level and the true authority of the teacher.

The article considers two feedback methods: questioning and testing. Considering the results of questionnaires and testing of students obtained in the first year of study, the teacher made adjustments to the process of teaching the subject “Computer science” in the next academic year, which allowed, without changing the course program, to “work out” weaknesses in students' knowledge and offer more clear examples, practical tasks, homework. As a result, grades for the exam in this subject are higher than in the first year. That is, feedback from students significantly helps to improve both the content of the course, the teaching methodology, and provides increased student achievement in the subject of “Computer Science”.

### **Advantages and disadvantages of the considered methods**

There are a large number of different approaches (methods) to assessing the quality of learning organization, each of them has its advantages and disadvantages. In the following table, the authors noted the features (characteristics) of some methods for assessing the quality of student learning (Table 1).

Currently, lecturers of the department use these methods to provide high-quality training for students, stimulating their independent and creative educational activities.

Thus, the conducted studies show that each method allows an objective assessment of students' activities, as well as raising responsibility for the results of their academic work.

*Table 1 Characteristics of methods for assessing the quality of student learning*

Methods	Advantages	Disadvantages
Statistical analysis	Allows to identify the effects of factors, patterns and relationships between the studied factors and parameters	Errors of the 1st and 2nd kind, taking into account falsely reliable results (Wasserstein & Lazar, 2016). Instability of p-levels on equivalent samples (Nuzzo, 2014). Possible irreproducibility of the results, which may be due to individual characteristics of students and changes in the learning process
Method for assessing the complexity of the semantic networks	The advantage of network models is the visibility of the domain description (Katalnikova et al., 2017). Assessing the quality of the learning course using quantitative metrics of complexity of the semantic web attracts with the simplicity of the method and ease of use	Unfortunately, this method has a too large assessment step; with small changes in the learning course, this method does not produce noticeable changes in network characteristics
Quality Assessment Method	The ability to evaluate both student performance over a certain period, and evaluating the effectiveness of a particular academic structure, for example, a department (Grigorash, 2018); The possibility of using, together with other methods of improving the educational process (for example, a new course structure or with an interdisciplinary approach)	The most important drawback is the average score, that is, the results of the study are an average value
Questioning Method	The advantage of this method is the presence of quick feedback, so that lecturer can easily modify the course according to the current needs of students, without reducing the quality of the course and not losing sight of the overall goal	One of the main shortcomings is the subjectivity of the opinions expressed. Errors in the preparation of questionnaires. Violation of external and internal validity (Bernstein, 2018), (Gehlbach, Robinson, Finefter-Rosenbluh, Benshoof, & Schneider, 2018)

## Conclusion

The main task of modernization of higher education is the formation of an effective strategy to improve the quality of educational services. Obviously, separate, unsystematic methods are not effective. Only a comprehensive and holistic approach which takes into account the accumulated experience, can lead to tangible achievements in the field of improving the process of higher education and achieving competitive quality standards, for which it is necessary to solve the following problems:

1. With the help of the designed questionnaires carry out monitoring with a certain frequency,
2. Apply the method of testing students as a guarantor of the quality of assimilation of knowledge,
3. Apply the methods of mathematical statistics, quality and complexity assessment of the semantic network as a mechanism for coordination and interconnection of various methods,
4. Based on the creation of a unified system, continue the process of improving the development strategy of the pedagogical activity of the department in order to meet the needs of consumers of higher education and the compliance of learning with the needs of the modern labour market.

Further studies are related to the determination of the effectiveness of the lecturers of the department, their educational, methodological and scientific work.

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## MYKOLA LEONTOVYCH'S PEDAGOGICAL LEGACY IN PODILLIA (LATE 19<sup>TH</sup> AND 20<sup>TH</sup> CENT.)

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***Abstract.** The aim of the article is to reveal the essence of pedagogical ideas of Mykola Leontovych, a composer and an educator, who defended the need for a closer connection of pedagogy and art, particularly in the field of professional training of future teachers in Podillia region of Ukraine during the late 19<sup>th</sup> into the early 20<sup>th</sup> centuries. The methodology of the study is based on the application of historical, chronological, cultural, and axiological approaches, which place the evolution of M. Leontovych's views in a broad socio-cultural context. The creative scientific approaches of M. Leontovych regarding the necessity of mastering art in the system of vocational training of future teachers were emphasized; the basic principles of the interrelation of art and pedagogy in forming the personality of future teachers were substantiated.*

***Keywords:** institutions of education in Podillia, M. Leontovych, pedagogical action, pedagogical education of Podillia, pedagogical professionalism, Tulchyn diocesan women's college.*

### Introduction

It is impossible to solve the complex task of integration of the national education into the global educational space without carefully studying Ukrainian historical past, including the establishment of aesthetic education in the educational institutions of Podillia region. This process unfolded on the basis of unity of science and art, through introduction of artistic, dramatic and creative disciplines into the practice of teachers' training. The use of art in the educational process positively influenced the formation of personality, taste, refinement – the qualities, necessary for further pedagogical activity, as evidenced by the accumulated experience of training future teachers in the

educational institutions of Podillia in the late 19<sup>th</sup> into the early 20<sup>th</sup> centuries. Aesthetic disciplines (drawing, singing, music) contributed to the formation of professional pedagogical culture and pedagogical skills of future teachers. At the same time, the artistic disciplines were intended not only to shape the aesthetic culture of the students, but also to provide professional training for those teachers who were keen to organize extra-curricular circles, school choirs, orchestras, performances at the educational institutions where their further pedagogical activity would take place. During the studied historical period significant contribution to the development of pedagogical education in Podillia was made by the prominent cultural figures: D. Zhudin (Shul'ts, 2012), I. Soshenko (Chalyiy, 1992), K. Stetsenko (Kudrytskyi, 1992), and in particular, M. Leontovych, a composer, folklorist, teacher. However, M. Leontovych's impact, the essence of his pedagogical ideas, the need for a closer connection of pedagogy and art, in particular in the field of professional training of future teachers in Podillia in the late 19<sup>th</sup> – early 20<sup>th</sup> centuries were insufficiently researched in philosophical, historical, pedagogical and scientific works.

### **Methodological foundations and methods of the research**

The methodology of the study is based on the application of historical, chronological, cultural, and axiological approaches, which direct the research towards the philosophical understanding of culture. These approaches enforce consideration of pedagogical education of Podillia in close connection with the richness of Ukrainian cultural heritage. In the course of the research, a set of research methods was used, namely, the method of pedagogical biography.

According to our analysis, the abovementioned problem has been repeatedly addressed by the pre-revolutionary, Soviet and contemporary Ukrainian researchers: N. Demianenko (1998), A. Zavalniuk (2002), T. Zuziak (2017), O. Lavrinenko (2009), A. Lysyi (1995), V. Pererva (2014), I. Sesak (1999), O. Suhomlynska (2003), M. Yarmachenko (1991) and others.

### **Results and discussion**

In modern psychological science, there exists, not without grounds, the statement about feelings being the very core of human life. Development and viability of feelings are sustained by intelligence. And this is true vice versa. I. Ziazun repeatedly emphasized (Ziazun, 2013) that knowledge by no means can be separated from feelings, since each person gains his or her own positive emotional experience of perceiving information only if the latter is personally appealing. That is why, regardless of the discipline he is teaching, the teacher should saturate the pedagogical activity and its subjects with the positive

aesthetic emotions. He should not start the class unless it generates students' positive emotions. This is the basis for the teacher's authority.

Mainly at the end of 19<sup>th</sup> and into the early 20<sup>th</sup> century the development of pedagogical education and science in the territory of Podillia was connected with the figure of N. Pirogov, a prominent surgeon and a teacher, curator of the Kyiv Educational District. He was one of the first to raise the issue of special pedagogical education before the Governor-General of the Southwestern region, Prince I. Vasilchikov, in a letter dated on October 20, 1859. Prince Vasylychikov, while considering a petition to the Ministry for training teachers for public schools, said, "The trustee of the Kyiv Primary District, whom I had dealt with in this regard, finds that no one can be the best teacher of a rural school than a peasant himself, acquainted with the needs of rural life and living in the same environment that he is called to educate. For this purpose, the privy councillor N. Pirogov aims to select young and capable peasants aged between 15 and 17 to train them to be village teachers. They should receive pedagogical education in established pedagogical seminaries. It will take two years to train the teachers, afterwards they will be able to teach reading and writing, arithmetic, and conventional knowledge, visually presenting them in a special way" (Arsenev, 1995, p. 118).

Educational establishments opened in Podillia were distinguished by the fact that artistic component in teaching and personal development was dominant there. In general, it is safe to say that for pedagogical education in Podillia the end of the 19<sup>th</sup> century was marked with creative experiments, initiated by scientific and pedagogical community and teaching staff. The elements of pedagogical mastery were introduced in the system of general pedagogical training; institutions' authorities turned to the participation of the students in the extracurricular and out-of-class activities as to the important component of forming higher competences and skills of the future teachers. While the holistic system of practical training for teaching activity was being formed, the urgent need aroused in theoretical and practical courses aimed to develop the basic principles of communicative culture of speech, the basics of the psychological behavior regulation techniques, the ability to organize a system of communication. Not only the lecturers of the philosophical-pedagogical departments were involved in this work, but also artistic figures – actors, musicians, choreographers.

Among them was **Mykola Dmytrovych Leontovych** (1877–1921), a talented Ukrainian composer, a well-known choral conductor, a public figure and a teacher, a profound expert in folk art, who rejoiced Ukrainian people with many wonderful works. M. Leontovych was born on December 13, 1877 in the village Monastyrok of Bratslav county in Podilia (now Vinnytsia region) into the family of a village priest. In 1887 M. Leontovych entered the Nemyriv high

school. In 1888, due to lack of funds, his father transferred him to the Shargorod Theological College, where all pupils were full boarders. In 1892 M. Leontovych entered the Podilia Theological Seminary. In addition, Leontovych's formation as a musician was influenced by rather brisk cultural life of Kamianets-Podilskyi (Voitsekhivska, Volkovynskyi, & Dmytriienko, 1995).

In June 1899, after his second year in grade six, M. Leontovych graduated from a seminary and was determined to work as a teacher in rural schools and, at the same time, to improve his musical education on his own. After graduating from Podolsk Theological Seminary in 1899, M. Leontovych worked as a teacher of Ukrainian and Russian languages, singing, music, arithmetic and geography at the Chukiv Secondary-Class Church Parish School from 1889 to 1902. At his own expense, the young teacher purchased several violins, a cornet, a flute, a trombone and organized an orchestra of students and teachers. The orchestra's repertoire included works by Western European and Russian classics, plays by Ukrainian composers: Ukrainian tunes "Dudaryk", "Choboty", "Shulika", "Oh rozvyvsia" as well as the "Shumka" piece by Ukrainian composer M. Zavadovsky and works by J. Strauss, M. Glinka and others. As a teacher of singing, M. Leontovych studied the Ukrainian, Russian, Belarusian, Georgian, Polish, Jewish, Czech, German and Italian folk songs with his students' choir (Umanets, 1985).

These facts indicate that M. Leontovych drew students to the national culture, instilled a love for their mother tongue, the native word, nourished respect for their homeland. In those stormy times, when Podillia was under the rule of the Russian Empire and when everything Ukrainian was banned, M. Leontovych fostered the spirit of a patriotic citizen in his students, a sense of international unity. Moreover, the activity of the teacher set an example to the leaders of professional pedagogical education in Podillia. Involving students into the domain of art, music, singing was considered positive, therefore, art disciplines were massively introduced in the curricula of pedagogical seminaries (Zuziak, 2017). This process, in the considered historical period, becomes quite profound, since the teacher had to be ready to influence the sensual sphere of his students, to possess the necessary arsenal of knowledge and skills in order to excite the students' positive feelings. Podillia educational authorities of the late 19<sup>th</sup> century were also aware that playing musical instruments, the basics of declamatory art, staging and dramatics, directing and choreography should become a powerful means of development and communicative perfection of future teachers, contributing to the formation of leading components of their pedagogical level of mastery and ability to perform pedagogical activity-action during the lessons and out-of-class.

It should be emphasized that M. Leontovych was one of the first to start systematizing old Ukrainian songs, recording them from the locals of Chukiv and surrounding villages. The first author's compilation "Songs from Podillia" appeared during the "Chukiv period", as started the work on the second compilation. These facts testify to M. Leontovych being a talented teacher who took teaching very seriously and showed an original and striking talent. After his working relationship with the Chukiv school director (Rudansky, a priest) was ruined, M. Leontovych moved to the city of Tyvriv, where during 1901–1902 he worked as a teacher of church singing, music and calligraphy at the Tyvriv Theological College. At the same time, the composer buys a clavichord for a little money and starts to "sort out for choral singing" the folk songs he previously collected in the Bratslav region (Sherotska-Kravchuk, 1991). Later on, in 1902, being an established artist and experienced teaching practitioner, M. Leontovych moved to the city of Vinnytsia, where he took up the post of singing teacher of the Vinnytsia Church-Teacher's School; he acquires a violin and improves his playing. He also started creating a variety of music groups, directing a student choir and a brass band. Leontovych's fascination with folk songs and choral singing prompted the choirs, music bands and orchestras to emerge instantly wherever he appeared (Blahodyr, 2002).

It may be stated with confidence that Tulchyn became the main place of M. Leontovych's life and work. There the artist wrote the covers of Ukrainian folk songs: "Snow is flying from the mountain", "Shchedryk", "The high mountain stands", "Oh the star has come", "Above the river bank". In the Tulchyn Diocesan Women's College M. Leontovych received the title of regent from the Imperial Singing Chapel (he passed the exams for the rank of regent of church choirs at the St. Petersburg Court Chapel in 1904). Comprehensive analysis of old printed books showed that since October 12, 1908 M. Leontovych began to work as a teacher of church singing and directed the school choir, taught arithmetic in the first class, and in 1913 temporarily taught the Russian language in grades 1–4. Due to the difficult financial situation, during 1912 he also taught singing at the private Tulchyn Women's gymnasium of O. Zvynogrodska (*Otchet*, 1915).

An outstanding composer, teacher, artist, Leontovych with his own self-inclusion into the pedagogical action-interaction, personally proved the unbroken unity of word and deed, exemplified the boundless dedication to the cause of children's education and personal development. M. Leontovych, the consummate artist, possessed the most important professional traits that revealed the core of his personality to be not only a creator, but also a true teacher-master. In his few reflections on the teaching profession, he assured the readers that through the joy of acquiring knowledge freedom manifests itself; as joy is

good, it is always beauty, it is always creativity – values so much needed for the teaching profession (Zuziak, 2017).

Exploring M. Leontovich's figure, A. Porozhnia provides invaluable memories of his pupils. Thus, the women's college student Elizaveta Karagina remembers, "...He was tall, straight, handsome, distinguished for his civility. I do not remember any case that he raised his voice: when indignant, he instantly fell silent and detached. He directed the choir in a very special way – the sound was crystal clear... he was loved and respected by everyone, and his boss called him the noblest" (Porozhnia, 2002, p. 4).

From the recollections of a former pupil of the women's college, cited by I. Sherotska-Kravchuk, we learn about the unsurpassed pedagogical talent and high level of pedagogical skills of the composer: "...he addressed each of us in turn, alphabetically, but did so as if the father was addressing to his own children. Seeing many sad and anxious faces, he immediately came with some innocent joke to cheer us up. Instinctively, we felt his favorable attitude towards us and confidence and respect for the new teacher were born in our hearts. Teacher Mykola Leontovych gave interesting lectures, starting them with a song and its meaning in human life. The gentle tone of speech and his sincere smile as if evoked intimacy to the teacher in the souls of the girls. M. Leontovych taught us Ukrainian songs, though he had to meet the requirements and also teach Russian ones. The ecclesiastical works of D. Bortniansky, which reflected elements of the Ukrainian musical style, were M. Leontovych's favorites (Ryzyhkova, 2001); he gave his soul in them. Much later, in the stormy year of 1918, a new discipline, the Ukrainian language, was introduced, and we guessed who would teach us. M. Leontovych convinced everyone in the class that we are citizens of the Ukrainian National Republic..." (Sherotska-Kravchuk, 1991, p. 5).

Viewing art as an extremely powerful component of the future teachers' training, M. Leontovych through his creative, promotional pedagogical work convinced contemporary theorists of pedagogical science that only aesthetically focused pedagogical action of the teacher is almost continuously aimed at increasing the level of "personal promotion-progress" of literally every individual. This pedagogical action reveals and nourishes his unique natural inclination: first to study, then to self-study and afterwards to self-education, and then to the individual creativity in any area of life. Through the Ukrainian folk songs, through the refined and framed word, through verbal and non-verbal communication, which he so skillfully combined in his pedagogical action, the outstanding composer and teacher M. Leontovych firmly convinced: the teacher is obliged to bring the child closer to the proper level of her psychological experience in the future life, revealing through her aesthetic feelings, intellect, and will the mysteries unknown to her. Out of these mysteries character is

formed and polished, strength and brightness of temper are acquired, personal concept of Self emerges, and competences are tempered.

During his lessons, the composer introduced future teachers to the various musical genres, to the heritage of Ukrainian and Western European composers, which in turn broadened the general outlook of students. In addition, M. Leontovych taught not only to sing and play musical instruments, but also to love and understand music. He was a true advocate of musical art, in particular, of Ukrainian folk; he led adult choir groups, amateur groups, lectured. With the participation of the students, the composer directed, staged and organized musical and literary evenings. In particular, in 1910 at the Tulchyn Diocesan School under the leadership of M. Leontovych pupils of the 3rd class staged a children's opera "Koza-Dereza". The vocals, so exquisitely performed by the students, were remastered by the composer (*Otchet*, 1911).

M. Leontovych convinced the pedagogical elite of the time that it was essential for future teachers to become familiar with the elementary foundations of musical theory, with the heritage of Ukrainian, Russian and Western European composers. In Tulchyn, the composer spent a considerable amount of time adapting Ukrainian folk songs, yet this did not make him abandon caring for the children of ordinary peasants who had studied in their schools, but came to him for the private music lessons during their vacations. The composer loved such activity, it inspired his creativity and pedagogical educational activity, there fore he dedicated all his free time to communication with the pupils (Porozhnia, 2002).

It should be noted that during the period of teaching in the ecclesial schools and colleges of Podillia M. Leontovych professed the ideas of necessity to develop the sensual sphere of future teachers; he was adamant that knowledge by no means can be separated from feelings, since each person gains his or her own positive emotional experience of perceiving information only if the latter is personally appealing. Being a talented teacher, the composer taught students the choral techniques and performing methods while they were singing, saturating the pedagogical action and its subjects with positive aesthetic feelings (Zuziak, 2017). As a result, the process of mastering knowledge for each student became necessary, desirable and joyful. The pedagogical action of the artist-teacher was based on a positive "mutual experience", "mutual-feeling" in the interaction of the teacher and students; his sophisticated teaching style helped to outline the contours of the students' free and creative psychological state, their spiritual and physical health within the educational system.

In pedagogical work with future teachers M. Leontovych adhered to the progressive pedagogical techniques and principles of his time, using the traditional achievements in musical pedagogy of both Western European and Ukrainian authors, who have not lost their relevance today. M. Leontovych

defended the idea of aesthetic education of all students; he considered that studying music and singing should be mandatory, regardless of musical talent. It is worth noting that much later, in 1920, the composer founded a music school in Tulchyn, where he continued his teaching activity (Bardinova, Bezobrazova, Borshch, & Hrynova, 2004).

Having a considerable pedagogical experience, M. Leontovych always professed music-aesthetic and artistic-educational priorities, believing that folk songs and folklore should become the basis for teaching children musical art. During the study of musical notation, the composer resorted to various methodical techniques that were the most efficient. He developed a textbook, based on the ideas of heuristic study and learning of didactic material. Building a textbook on the folk music and songs, M. Leontovych thus brought it closer to the needs of teaching singing and music in general, especially in a rural schools, referring to teachers who had at least some musical training. M. Leontovych introduced to his study guide the folk songs from the collections of M. Lysenko, K. Stetsenko, from the recording made by K. Kvitka, Lesia Ukrainka and other folklorists, as well as the melodies of his own records (Umanets, 1985).

Speaking about the pedagogical phenomenon of M. Leontovych, M. Bukach (Bukach, 2002, p. 72) draws attention to the fact that the composer created a unique system of musical education, which was based on the skills of “note-less” singing; what laid ground for this system were the melodies of Ukrainian folk songs. Unlike other techniques, where the main attention was paid to the study of musical literacy, the composer carefully developed the problems of the initial (auditory) stage of vocal-choral work with children. In fact, one can confidently describe M. Leontovych as a developer of methodological foundations of music-pedagogical education, since his system was based on the principles of comprehending from smaller to bigger, from lower to higher, from elementary to complex. At the same time, the composer considered the principle of adherence to consistency in acquiring the skills while mastering musical art to be the determining one. And this, in turn, contributed to the emergence of highly artistic, almost professional children’s groups in the institutions where M. Leontovych taught. The choral groups he created were distinguished by a proper level of vocal and performing culture, becoming an example to be followed (Bukach, 2002).

Among the manuscript heritage of the composer there are works on theoretical problems of pedagogy and on the methods of children’s musical education. Leontovych later systematized his pedagogical principles and methods of work with the orchestra in the articles “How I organized an orchestra at the village school” (1919); “Materials for singing in elementary school”; “Practical instructions to the technique of singing in choirs”; “Musical singing at school” and others. Of great interest is his school textbook “Practical course of

singing in secondary schools of Ukraine” (1920). This scientific-methodical work was based on the psychological-pedagogical and methodological-didactic principles, developed by the leading art and pedagogical theorists and practitioners of Ukraine – M. Lysenko, K. Stetsenko, K. Ushynsky and others.

### **Conclusions**

The contribution of the prominent Ukrainian composer, folklorist and teacher M. Leontovych to the development of pedagogical education in the Podillia region at the end of the 19<sup>th</sup> and into the early 20<sup>th</sup> centuries was determined basing on the method of pedagogical biography. M. Leontovych, being a gifted person by nature, convinced the pedagogical community of Ukraine that pedagogical action is an aesthetic phenomenon. Through his promotional activities the composer illustrated the balance of science and art, convincing that the measure and talent of the teacher to build pedagogical effect on the positive feelings of beautiful and sublime, and in some cases, comical, is a dominant component of pedagogical skill.

Study and creative interpretation of M. Leontovych’s legacy not only as an artist, but also as a teacher promotes understanding of pedagogical education as a complex multicomponent and systematic formation.

M. Leontovych convincingly argued that presence of clearly articulated common national interests should be the basis for determining the core of national security. These interests should embody a conscious need of the nation for self-preservation, development and maintenance of its own security. For the descendants, the creative legacy of the composer became a significant step towards the development of the basic principles of Ukrainian studies, because, according to T. Usatenko, “Higher values in Ukrainian studies are the concepts that characterize the social sphere (justice, freedom, patriotism, property and ethnic identity), the sphere of creative activity (creativity, work), the sphere of personal relationships (love, duty, motherhood, fatherhood, nuclear family, extended family, domesticity), ideas (religious, philosophical, scientific value principles), etc. Ukrainian studies also encompass the values of industrial-technogenic culture, marked by a pragmatic utilitarian and practical nature...” (Usatenko, 2009, p. 171-172). These vital principles determined M. Leontovych’s life, his creative and pedagogical areas of activity.

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## WHAT DOES IT MEAN “TO BE A GOOD NURSE”? PERCEPTIONS OF NURSING STUDENTS

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**Abstract.** *“To be a good nurse” is a complex phenomenon. It is the essential goal in nursing training, education and practice, and can be experienced through work practice. However, “to be a good nurse” is taken for granted and is rarely studied, mostly with the focus on personal features and in relation to good nursing and quality of nursing. The aim was to reveal nursing students’ work experience-based perceptions of the personal meaning of “to be a good nurse”. Sample. Research participants comprised 110 final year nursing students. Methods. For data collection were used unstructured individual narrative-based written reflections and the data was analyzed by applying the inductive manifest qualitative content analysis. Results. For nursing students “to be a good nurse” means courage, professionalism, loyalty, humanity, solidarity and caring. It is an individually experienced phenomenon, meaningful for nursing students when they collaborate with nurse practitioners, learn through cooperation and observation, and have the opportunity to act autonomously by taking responsibility for their own actions. Conclusion. “To be a good nurse” is a part of who the student is and the values that s/he holds dear to her/him.*

**Keywords:** *good nurse, inductive manifest qualitative content analysis, Lithuania, nursing student, reflection.*

### Introduction

“To be a good nurse” requires more than professional values of care and compassion (De Carvalho Macedo, 2014). Beyond this the nursing student can decide what kind of a nurse s/he wishes to be. A good nurse would want to make a difference and must be a knowledgeable, competent, skillful critical thinker and sympathetic personality (Ghadirian, Salsali, & Cheraghi, 2014).

“To be a good nurse” in this research is understood as a phenomenon in which the notion “to be” is essential, and is not the same as “being” or “to become”. Here “to be” means exists, happens, is located and shows identity; the condition of the subject (Free English Grammar Guide, 2017). The condition of the subject – a nursing student – in this research is seen as personal and professional development, change, transformation in striving “to be a good

nurse”, and this is possible through learning from nurse practitioners at all times of study practice in healthcare institutions.

“To be”, in this research is not a synonym for “becoming”, which means “begin to be” (Thesaurus.com, 2017). “Becoming” is focused on the process, and the individual here must be the instrument in the process, hence the priority is the process itself. This is different from “to be”, where the process also has a place, but the individual with her/his features and competencies is the “outcome”, which is never the status quo, and is oriented toward the best examples of role models (Hawkins & Morse, 2014).

Perceptions of nursing students in this research are seen as a complex mental process of acquiring knowledge and understanding through thought, experience, and the senses. Our knowledge and experience influence the way we perceive the world (Khademian & Vizeshfar, 2008).

No primary research studies in Lithuania were found in regard to the phenomenon “to be a good nurse”. Internationally, research focuses on a nurse’s personal features such as being caring, intelligent, calm, positive, communicative, respectful, self-confident, skillful, mindful (Kleber, 2015), motivating others, cooperative, loving, contributing to others’ health (Sua, 2013), compassionate, empathetic, selfless, self-aware, technically strong with a thirst of knowledge (Gokenbach, 2012). “To be a good nurse” in the literature is described within the context of “a great nurse” (Middleton, 2014), “nurse’s behaviour” (Larsson, Sahlsten, Segesten, & Plos, 2011), “good care” (Mako, Svanäng, & Bjerså, 2016), “individualised care” (Suhonen, Välimäki, & Leino-Kilpi, 2002) from the perspective of nurses, patients or their relatives. No attention is paid to students’ perspectives in regard to the phenomenon of “to be a good nurse”.

The aim of this study was to reveal and describe nursing students’ work experience-based perceptions with regard to the meaning of “to be a good nurse”. This qualitative research was focused on answering this research question: “What does ‘to be a good nurse’ mean for final study year nursing students?”

## **Methodology**

### *Sampling and Data Collection*

This study applied purposive sampling. There are no methodological tradition established criteria when using inductive manifested qualitative content analysis (IMQCA), for the number of informants, nor the number of pages based on the informants’ written text (Bengtsson, 2016). Two criteria for respondents’ search were chosen: i) being a final (3rd) year and a final (6th) semester nursing student at professional Bachelor level; ii) being a student of the University of Applied Sciences (UAS). The sample consisted of 110 research participants from all 5 UAS in all 5 regions of Lithuania.

Data were collected in the format of unstructured individual narrative-based written reflections (INWR). The experience-based reflections are necessary for nursing students to improve their practice(s) and must be used for their professional growth (Castleberry, Payakachat, Ashby, Nolen, Carle, Neill, & Franks, 2016). The data collection with INWR was a onetime event and research participants were not re-contacted. Nursing students were instructed to narrate the situation regarding their experiences during professional nursing practice in healthcare institutions throughout their study years when they had experienced “what does it mean to be a good nurse” by observing nurse practitioners and collaborating with them. The length of written reflections was between 301 and 1,027 words. In total, the analyzed text consisted of 52,675 words.

#### *Data Analysis*

Research using IMQCA focuses on the characteristics of language as communication with attention to the content and contextual meaning of the text (Elo & Kyngäs, 2008). In IMQCA, data are presented through (sub)categories. IMQCA consists of four stages (Bengtsson, 2016): i) *The decontextualization*. The research team applied the multiple reading of the transcribed texts to obtain the sense of the whole, before breaking it down into smaller meaningful analysis units (MAU). The MAU was at least one sentence and each identified MAU was labelled with a code. ii) *The recontextualization*. The research team checked whether all aspects of the MAU content had been covered in relation to the research question. The original text was re-read alongside the final list of MAUs. iii) *The categorization*. All the subcategories were compared with each other and integrated into categories. Categories were internally homogenous and externally heterogeneous, which means that not data should fall between two groups and not fit into more than one group. iv) *The compilation*. The research team worked through each category and used the research participants’ words, remaining aware of the need to refer back to the original text. For each category, the researchers chose appropriate MAU presented in the running text as quotations.

#### *Ethics*

Ethical approval for research study was received from the Board of Ethics of the Vytautas Magnus University (24.06.2017, Protocol No. 5). Written permission to carry out the investigation was granted by Vice-Directors for Studies and Research of all five Universities of Applied Sciences (UAS), in which nursing students are trained and educated. All nursing students from the five UAS were sent an e-mail with information about the research purpose and what the research required of them. After nursing students received information about the research, they voluntarily made the decision whether to participate in the study, and e-mailed their agreement to the researcher (RB-S). Then they received by e-mail a request from the researcher (RB-S) to write the INWR. All the INWR of research participants were received by e-mail by one researcher (RB-S) and

collected in one file accessible only to the research team. Research participants were asked not to provide their names, surnames or other personal confidential information.

## Findings

Final study year nursing students relate their experiences of work practices throughout their study years and speak about the personal meaning in regard to the phenomenon “to be a good nurse”. By observing nurse practitioners, reflecting on practical experiences and compiling the nurse practitioners work patterns or models, nursing students remember facts and illustrate them with examples, whose analysis revealed that “to be a good nurse” for nursing students means courage, professionalism, loyalty, humanity, solidarity and caring (see Table 1).

*Table 1 What does it mean “to be a good nurse”: graduating nursing students’ perspective*

Category	Subcategory
<b>Courage</b>	Being self-confident
	Being tolerant
	Being prompt
	Stabilizing the patient’s emotions
<b>Professionalism</b>	Being responsible
	Being in compliance with requirements and rules
	Being accurate
	Managing the personal emotions
	Being autonomous in planning and implementing activities
<b>Loyalty</b>	Being dedicated to work
	Experiencing vocation
	Being dutiful
	Being patience
<b>Humanity</b>	Being benevolent (good will)
	Being sensitive
	Being empathetic
	Being friendly

	Being polite
	Being intelligent
<b>Solidarity</b>	Experiencing unity
	Reacting fast
<b>Caring</b>	Assuring (securing) the patient's dignity
	Being supportive
	Establishing the relationship
	Informing patient's relatives
	Teaching patient's relatives
	Empowering the patient for self-care

*Courage* is reflected through the personality of a nurse, who maintains a professional relationship with the patient, who manages personal and patient's emotions, makes decisions on time and is self-confident:

*One nurse who has been working on this job for many years did not agree with the prescription of a doctor because she thought the dose was too high. <...> the nurse concerned with the prescribed dose giving rise to suspicion, went to a doctor and found that he was still wrong (N7).*

In all nurses' professional activities and decisions nursing students relate to the patient for whose health and life s/he is working. Irrespective of the patient's emotions, the good nurse is tolerant: "it was possible to see that the nurse was able to communicate with patients; she tolerated all patients' insults" (N23).

The good nurse should be with a timely response to the situation and stabilizing the patient's emotions:

*He was very insolent - he spat, cried, sighed - he was probably drunk. In spite of these circumstances, the nurse, without hesitation, entered the patient's room. I, observing from afar, saw how a nurse communicates gently and with respect for the patient, as the patient caught his breath in a matter of minutes, and became calm (N88).*

*Professionalism* for nursing students means professionalism, which they relate to her/his responsibility and accuracy:

*In the morning the young patient - a woman - was moved into the stroke department <...> she was in a very bad condition. I saw how nurses cared about her the all the time she was in the department. Nurses were ultimately responsible for any injections (N30).*

*When she came to work, she immediately monitored the nursing plans left by other nurses by checking the record of injections and other procedures. When*

*the nurse did her job, she crafted everything very carefully <...> she loved the order very much (N56).*

Students relate professionalism to compliance with requirements and rules, autonomy in planning and implementing activities: “A nurse, who graduated in nursing long time ago, she still performs all the procedures according to all requirements” (N72).

*Loyalty* is manifested in two directions –

Nursing profession, this is expressed through dedication to work and vocation:

*One of the values I could highlight is dedication to work. During the practice, many times, I have had to face wonderful nurses who love their job endlessly, but they love the patient the most by striving to help him/her with all the professional strength (N55).*

*Personal features of the nurse* - dutifulness, which is related to the quality of caring and to the example of the ideal professional role model for nurse students: “the nurse is very dutiful. You always thought that she had to finish the job first, before she could rest. Such a dedicated nurse is a great example not only for me but for every student nurse” (N56); and patience, which is oriented to the relationship with the patient: “an elderly patient, who was very angry and unhappy with everything, was placed in the ward. So I was very impressed by the nurse’s patience” (N23).

*Humanity* is empowered through a nurse’s direct relationship with the patient and is based on the nurse’s good will and sensitivity:

*My most memorable event was when I observed the nurse communicating with an elderly woman. The nurse listened sincerely to what the woman patient said and also willingly answered the questions the patient had; the nurse attentively communicated with the patient as if she were a member of her family (N12).*

And empathy, friendliness, politeness, and intelligence:

*After this event, I remembered words of the chief nurse that a nurse is a person who has to understand that the patient, while sleeping in a hospital, in a foreign environment, feels emotional, and the nurse must be intelligent (N55).*

*Solidarity* is related to a focus on the patient’s health and life which requires an important unity:

*A woman with a poli-trauma was brought into the ward and she was in need of emergency assistance. Then the teamwork started: I connected the patient to the monitor; others intubated the patient, inserted a bladder catheter, and took blood samples. So I figured out how to work in a team (N24).*

Also it requires fast reaction:

*There was a calm response by the nurses. It seems everyone knew what to do and what they are responsible for. One called for reanimation, another was taking measurements and collected instruments/tools, and a third went to look for physicians (N47).*

*Caring* is implemented by the nurse with the focus on two subjects:

1) *the patient* through ensuring his/her dignity: “when the patient has drowned and the nurse has taken care of moving other patients to another ward, to ensure the privacy of the dying patient” (N54); establishing the mutual trust-based relationship:

*The nurse was able to properly access the patient, knowing what to ask, and gradually established a connection between her and the patient. Finally, the girl began to communicate more and more with the staff and with her loved ones* (N44);

Ensuring patient’s empowerment for self-care: “And the general purpose of all is not to do everything for that person, but to teach him/her to take care of him/herself” (N81).

2) *patient’s relatives* by providing them with moral and psychological support:

*After the patient was transferred, the nurse, who noticed a crying and the “lost” relative of the patient, did not ignore her and did not return immediately to the unit, but came to the patient’s relative, took her by the arm, led her to sit down and tried to soothe her* (N85).

Informing them about the situation and helping to plan and strategize help to the patient at home and teaching them the subtleties of patient care at home: “taught the family members how to properly help to change the patient’s position in bed, how to properly maintain patient hygiene” (N11).

## Discussion

Nursing students find the meaning of the phenomenon of “to be a good nurse” in relation to *courage*, which in findings is manifested within the interactions between the nurse and the patient, where the nurse acts for the patient’s wellness. The nurse requires professional courage to maintain the personal ability to engage the self in care (Arman, 2007) and to help patients face their own vulnerability and suffering (Thorup, Rundqvist, Roberts, & Delmar, 2012).

“To be a good nurse” for nursing students means *professionalism*, which is related autonomy in planning and implementing activities. Nurses as professionals are independent decision-makers in healthcare provision (Ghadirian et al., 2014). Nursing students emphasise that accuracy for them is a part of a nurse’s professionalism. Maintaining standards of activities is important in nursing professionalism, and for a nurse it means being precise and accurate (Jonsen, Braddock, & Edwards, 2016).

Nursing students mention that loyalty means a nurse’s features such as patience and dutifulness, when both features are incorporated within the nurse’s

patient relationship. This “relational loyalty” (Moody & Pesut, 2006) develops from fostering mutual trust between the nurse and the patient.

Nursing students emphasise the nurse-patient relationship as the context and the aim through which the nurse may express her/his *humanity*. Once the nurse sees patients as an extension of her/his own humanity, s/he will go that extra mile to do the best s/he can for them (Felstead & Springett, 2016).

Nursing students mention that the focus of nurses’ *solidarity* is on patients’ health and life. Solidarity includes the responsibility of nurses to prevent outbreaks of illness when working in institutions where vulnerable human beings live and suffer (Dawson & Verweij, 2012).

For nursing students *caring* ensures the patient’s dignity, establishing mutual trust and empowering the patient’s self-care. It follows that a good nurse who really ‘cares’ wants evidence about how to achieve the outcomes, and needs the skills to make decisions in complex situations (Sherman, 2012).

*Study limitations.* The limitation of the study relates to IMQCA, which is inherently reductive, disregarding the context that produced the text, as well as the state of things after the text is produced.

## Conclusion

“To be a good nurse” is a personal and professional development and improvement-based phenomenon, which is meaningful for nursing students when they have the opportunity to collaborate with nurse practitioners and to learn through cooperation, observation and autonomous practice. This phenomenon is process-related, which motivates nursing students to reflect before, in and after professional acting/ practicing. It means seeking to be the best role model, which is realistic, based on work practice.

“To be a good nurse” for nursing students means a great opportunity for everyday interaction with patients, their relatives, colleague nurses, healthcare/medical staff and administrators. This gives the nurse the possibility to learn from other careers and add to her/his knowledge base while developing one’s own interpersonal skills. “To be a good nurse” for nursing students is a part of who the students are and the values that they hold dear – integrity, lifelong learning, excellence, proficiency and connection.

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## **BECOMING A TEACHER: HOW TO RECOGNIZE THE SELF AS A LEADER IS A CLASSROOM**

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**Abstract.** *The notion of ‘teacher leader in a classroom’ recently has been shifted. In the past, teacher leadership in a classroom was limited to didactics and expertise. Teachers have long served as ‘executors’, ‘executants’, not ‘leaders’ who are capable to manage the change and co-creation of knowledge within the interaction with students in a classroom.*

*The aim of the study is to provide the descriptive analysis on contemporary research-based development regarding teacher leadership with the focus on concepts such as ‘becoming a teacher’, ‘professionalism of a teacher’, ‘co-creation’ and ‘teacher leadership’.*

*Methods.* *The study is based on descriptive theoretical analysis.*

*Conclusion.* *Becoming a teacher is the continuous process and means accepting the challenge of imparting knowledge and guidance and approaching a high degree of ambivalence as it requires great diligence on the part of the teacher to be able to carry out her / his professional responsibilities. Co-creation is inseparable part of both - becoming a teacher and being a teacher leader as it helps to support the positive teaching-learning relationships and create the effective learning environments. Teacher leadership in a classroom is impossible to implement without self- recognition, which means in teaching practices teacher’s self-awareness.*

**Keywords:** *becoming; being; co-creation; learner; teacher leadership; teaching.*

### **Introduction**

*Relevance / importance of a topic.* To be a teacher means to find personal fulfillment, receive community respect and to have the opportunity to interact with multiple learners on a daily basis (Zeiger, 2019). If the teacher wants to be a leader, s/he must connect with learners and reach them on multiple levels, because the teacher leader is committed to her / his learners’ well-being both inside and

outside the classroom (Danielson, 2007). Recently, world-wide research publications provide considerations on different roles for teachers as leaders (Allensworth & Miller, 2002) and could be divided into several directions:

- attributes - being positive (Lumpkin, Claxton, & Wilson, 2014), being open (Silva, Gimbert, & Nolan, 2000), being peaceful (Barth, 2001), being sociable (Keller, 2011), being organized (Allensworth & Miller, 2002), being accommodative (Danielson, 2006), being creative (Goleman, Boyatzis, & McKee, 2002);
- traditional roles - controller, assessor, coach, tutor, organizer, facilitator, counselor, instructor, examiner, mentor, disciplinarian, performer, observer (Parlar, Cansoy, & Kılınc, 2017);
- unconventional roles - provider of experiences, motivator, arbiter, balancer, prompter, participant, rapport builder (Zeiger, 2019);
- capabilities - exploiting her / his talents as a visual teaching aid to incorporate mime, gesture and expression to convey meaning and atmosphere in the classroom (Danielson, 2007), being culturally aware (Goleman, Boyatzis, & McKee, 2002).

*Research issue.* The notion of ‘teacher leader in a classroom’ recently has been shifted. In the past, teacher leadership in a classroom was limited to didactics and expertise. Teachers have long served as ‘executors’, ‘executants’, not ‘leaders’ who are capable to manage the change and co-creation of knowledge within the interaction with students in a classroom (Cawelti & Protheroe, 2001; Corcoran, Fuhrman, & Belcher, 2001). Traditional roles of teachers are not flexible and are focused on teacher’s skills, habits, personal features, what means external variables that do not manifest the full-value picture of a teacher leadership (Barth, 2001).

*The aim of the study* is to provide the descriptive analysis on contemporary research-based evidence regarding teacher leadership with the focus on concepts such as ‘becoming a teacher’, ‘professionalism of a teacher’, ‘co-creation’ and ‘teacher leadership’.

*Methods.* The study is based on descriptive theoretical analysis.

### **Becoming a teacher: particular capabilities of a teacher leader in a classroom**

Teacher is someone who helps learners to learn new things. Usually teachers are people who have a specific education and training to do that job, but we might consider as a teacher every person we can learn something new from (Cowley, 2011).

The notion ‘becoming a teacher’ is wrapped up with schooling and schools. The problem is that becoming a teacher involves formal and informal sides. Both sides are taken for granted, but the informal side receives the minimum attention usually and the teacher rarely seeks to keep the balance between formal and informal sides, and then s/he limits her / his leadership in the classroom and outside it (Hattie, 2009).

The formal side is the formally acquired education and the received certificate or diploma, which advocates the acquired qualification, the compulsory competencies by the individual and provides the formal professional right for the person to work in teacher’s professional position (Corcoran et al., 2001). ‘Becoming a teacher’ is not limited up to implementation of formal teacher roles and professional objectives, and aims. To become a teacher the person (who is already formal teacher) needs to develop particular capabilities (Danielson, 2007). All these mentioned aspects are related to teacher leadership while ‘becoming a teacher’:

- Fostering the learning, which involves setting out with the intention of someone learning something and considering learners’ feelings, experiences and needs. Teaching is only teaching if learners can take on what is taught (Cowley, 2011).
- Meeting the learner’s learning needs, experiences and feelings. Taking into account the learners’ existing and foreseen needs, is one of the things, which adds value to teaching (Didau, 2015). For teacher to become a teacher s/he must reflect on what might be good for learners and plan their educational interventions accordingly. Teacher needs to be attentive to learners’ feeling, emotions, experiences because the teaching professional is productive only if s/he is open (Nuthall, 2007). Incorporating the learners’ experiences into the contexts of teaching / learning subjects means teaching here and now and this is fundamental to ‘becoming a teacher’ process (Hattie, 2009).
- Making specific educational interventions concerns the process of taking defined and purposeful action in a learning by having a explicit focus, when the teacher tries to teach in ways that facilitate the teaching/ learning and concentrate the learners’ focus on the subject or issue, which they must to solve through learning (Didau, 2015).
- Empowering the self is a central principle in teacher leadership, with improvement in teaching / learning resulting in higher learners’ achievements. If teachers embrace curricular, instructional, and assessment aims, then they are more accept different levels of leadership responsibilities, commit to ongoing professional development, and help shape change in educational practice to benefit learners (Lumpkin et al., 2014).

- An understanding of emotional and cognitive self-awareness (self-recognition) leads to a recognition of how that awareness impacts teacher's decision-making and behaviors. Teacher leaders implement the self-assessment, which includes knowing one's strengths and limitations, resulting in stronger self-confidence, self-worth, and self-esteem. Teacher's self-awareness incorporates empathy and understanding for learners' emotions, experiences, attitudes and worries (Zeiger, 2019).
- Possessing a genuine solicitude for their colleagues teachers. A desire to support the excellence of other teachers is a visionary goal, enhanced by a professional respect and care for their professional fellows (The Teacher Leadership Competencies, 2014).
- Turning research into action, when teachers leaders can analyze data and create action-based plans that help learners and the school to improve. This methodological skill helps teachers to look objectively to learning achievements of learners, and use the statistical data to find directions for improvement (Cawelti & Protheroe, 2001).

Thus teacher leadership includes but is not limited up to managing teaching and learning, and resource allocation. Teachers leaders lead by engaging, inspiring, and motivating learners and fellow teachers to become more effective and efficient through their educational (teaching and learning-based) actions.

### **Becoming a teacher: professionalism of a teacher leader in a classroom**

Professionalism is defined as an employee's attitudes and behaviors towards her / his job (Hargreaves, 2000), individual's knowledge and skills peculiar to a specific field and taking the responsibility for her / his professional improvement (Demirkasımoğlu, 2010). Professionalism has a wide range of application areas related to community service, expertise, professional standards, and selection, supervision and autonomy in going into the profession (Parlar, Cansoy, & Kılınc, 2017).

For Poekert (2012) teacher professionalism is related to creating effective teaching practices, learning environment and improving professional knowledge, and skills to provide learners with richer learning experiences, meeting the learning needs of learners, developing a high-level commitment to the teaching profession, and having an adequate level of autonomy in the decision-making process. Evans (2011) examined teacher professionalism in three dimensions: behavior (the degree to which teachers could fulfill the requirements of the profession, i. e. the actions planned, implemented, evaluated, and developed by teachers for improving learners' learning), attitude (perspective and perception of a teacher concerning the profession), and intellectuality (having the knowledge and skills

required by the profession, improving themselves continuously, having a command of their field, and following closely the developments in the field).

Teacher professional behaviors emerge as a whole when individual qualities come together with the experiences of the individual and refer to all kinds of attempts aimed at improving teaching, and emphasize teachers' commitment to their profession, professional cooperation and high objectives for teaching (Tschannen-Moran, Parish, & DiPaola, 2006). Teacher professionalism includes autonomy, what means that teachers should behave autonomously in the processes of planning, implementing, and evaluating teaching (Danielson, 2006), and this is inseparable from teacher leadership in a classroom and beyond.

Teacher leadership needs to be supported by the school administration and the school community through cooperation, collaboration (Poekert, 2012). The professionalism is associated with teachers' attempts to bring learners' learning to a higher level at school. Teachers' professional behaviors, as a manifestation of professionalism, can develop in a school culture that supports teacher leadership (Lumpkin et al., 2014). A school culture in which professional development is considered important and is supportive leads to positive changes in classroom practices of teacher leadership (Hopkins, 2007).

Along with a school culture in which teacher leadership is supported, some changes are implemented in the professional behaviors of teachers to improve the quality of teaching and learning because in such school environment issues and mistakes are treated as learning tools and a cooperative environment for teachers, learners and all the school community (Wagner, 2006). Teachers get the opportunity to learn and create professional relationships with teachers, learners, school administration, and share good teaching and learning practices (Wenner & Campbell, 2017). In this context, teacher leadership becomes evident through increase of professional identity and self-awareness, cooperation and professional support among teachers, thus teachers can use what they learn to increase the quality of teaching and learning in classrooms (York-Barr & Duke, 2004). Teachers exhibit professional behaviors and this is associated with a school culture that promotes teacher leadership because professional cooperation and solidarity among teachers provide collaborative learning, and the supportive atmosphere for teachers at the school encourages them to use innovative teaching, which helps teachers to take more responsibility for learners' learning (Wagner, 2006).

Becoming professional teacher is a lifelong challenge. Thus becoming a teacher is a process more than an outcome of teacher leadership and it is a way of encountering new pupils and new classroom problems and of finding meaning and solutions to them as through these processes teachers grow as leaders in a classroom and beyond.

### **Becoming a teacher: co-creation in the classroom by a teacher leader**

Co-creation means engaging learners as active partners in learning. Thus learning in a classroom is a collaborative process among the teacher and learners who act as co-constructors of knowledge (Willis & Gregory, 2016). Co-creation recognizes and assimilates the knowledge that learners bring to the classroom (McCulloch, 2009). Co-creation can play the productive role in developing teaching and learning design, content of a subject, and assessment methods. It can stimulate learners to do research into the specific subject of learning. These attributes support the view that co-creation expands the pool of knowledge held traditionally by schools and teachers, transforming the learning experience into something that adds value for learners, as they are active participants in knowledge co-creation in the classroom and beyond (Bovill, 2013).

Co-creation in teaching and learning in a classroom means engaging learners to actively cooperate, collaborate, discuss and higggle with the teacher and each other (Bowill & Woolmer, 2018). In co-creation-based teaching and learning, the parameters of a lesson, such as aim, objectives, attitudes, achievable outcomes are herewith considered. This process creates the authentic culture of teaching and learning in a classroom, and means the shared responsibility for learning (Bovill, 2013).

Through co-creation the learning and teaching are experienced and implemented as a shared attempt as they are done with learners not to or for learners (Cook-Sather, Bovill, & Felten, 2014). Co-creation has the potential to significantly enhance the learners' learning experience by creating a sense of a learning community in a classroom. This is particularly likely where learners are involved in learning development and research, and cooperate, and collaborate with teachers. The partnership between the learner and teacher provides an opportunity for both parties to work as equals and equivalent, and develop a strong learning culture-based relationships (Bovill & Woolmer, 2018).

What is the meaning of relating the co-creation and a teacher leadership in a classroom? It is important to emphasize on the aspect how teachers and learners may need to adapt their thinking about learning to serve for the process and outcomes of co-creation, a world where the teaching / learning achievements of an individual teacher and / or learner may come through the shared efforts of learners to which belongs teacher. Thus for teacher being a part of learners' group means implementation of leadership in a classroom here and now through collaborating, cooperating, discussing, negotiating, sharing, distributing and / or serving as professional (McCulloch, 2009).

In teaching and assessment usually are used the traditional methodologies what are focused on the traditional roles of teacher and learner, and learning achievements of the learner. Adoption of co-creation approach in teaching and

learning is changing traditional understanding to recognition that personal teacher's and learner's performances are and will be based upon one's ability to collaborate, cooperate, share within the groups and / or teams of learners, to counterbalance the value of learning through relationships between the teacher and learners in a classroom (Dann, 2018).

Co-creation-based teaching and learning enable active, experiential and problem-based learning, which becomes specific to the context and sensitive to situation, and facilitates learners' engagement. This helps learners to develop new skills and confidence, and learn how to apply and manage knowledge in relation to their career decisions (Bovill, 2013).

### **How teacher could recognize the self as a leader in a classroom?**

Recognition of the self means as self-awareness. It is an awareness of one's own personality or individuality and the ability to accurately judge one's own performance, actions and behavior, and to respond appropriately to different situations, issues, cases. It is a skill, which is important to teacher leader effectiveness in a classroom and beyond (Lopez, 2017). Self-awareness is a conscious effort to invest in understanding who the teacher is, who are her / his learners in a classroom, what are values, rules, attitudes that are applied at school as institution and the community. Developing self-awareness as a teacher leader strengthens not only individual performance of a teacher, but learning effectiveness and efficiency as well. The understanding, trustworthiness and wisdom that self-aware teachers leaders possess through co-creation-based teaching and learning equips them with variety skills for success in a classroom and beyond (Gallo, 2019).

Teacher's self-awareness refers to a teacher having a particular and specific picture of her / himself: being able to identify personal strengths and values in order to function as teacher leader in a classroom and beyond. Self-awareness brings an understanding of how the teacher's values, attitudes, perceptions, rules, emotions and experiences regulate her / his behavior, judgement and self-belief. This helps teachers evaluate how they are doing as leaders in a classroom and beyond, and which areas in teaching / learning they need to improve. Thus, the self-awareness is a value for teachers leaders (Wan Yaacob & Don, 2018).

The recognition of the self as a leader in a classroom for teacher means the process when s/he works with the self continuously by reflecting and recognizing personal strengths and weaknesses and use that knowledge to do what is best for their learners in a classroom through co-creation-based teaching / learning. Self-aware teachers leaders are capable manage their personal strengths and weaknesses to optimize their leadership impact into teaching and learning (Spezzano, 2018). Development of self-awareness the teacher achieves through continuous journey of seeking for new knowledge, implementing continuous improvements

in teaching by reflecting on learners' learning, and complementing the self by taking a honest and accurate assessment of one's own skills and talents, and using that knowledge to do what is best for learners in order to be effective teacher leader in a classroom.

## **Conclusions**

Becoming a teacher is the continuous process, in which teacher finds the meaning through effective professional actions that are focused on the co-creation-based teacher-learner and teaching-learning relationships. Becoming a teacher means accepting the challenge of providing knowledge and guidance, and approaching a high level of ambivalence as it requires diligence from the teacher to carry out her / his professional responsibilities honestly and creatively. Becoming a teacher is a demanding professional demand and process as it about teaching, managing data, observing and studying different practices, improving teaching methodologies and making decisions for teaching in regard to successful learning of learners in a classroom.

Teachers are the role models and motivators for learners and the quality of their teaching has a great influence on learners' learning. But becoming a teacher does not mean that this process aims to become and / or to be a teacher leader in a classroom and beyond. Nevertheless that it is expected from every teacher to become and to be a leader at least in a classroom, but not every teacher is a leader, who is recognized by learners and the school community and the self. Teacher leadership and becoming a teacher both are continuous processes, which are interrelated in everyday professional performances: becoming a teacher requires continuous professional development and being a teacher leader requires being able to influence learners and their learning achievements. To be a teacher leader includes a combination of qualities and capabilities that are respected by learners and all school community. Then teachers can accomplish professional tasks because of the connection they have with their teaching profession and the learners, and school community they touch through it. Thus professionalism and particular capabilities that integrates personality and the profession are important components in becoming a teacher as well as recognizing the self as teacher leader in a classroom. Co-creation is inseparable part of both - becoming and being a teacher leader as it helps to create a good rapport with learners and support the effective teaching-learning relationships in a classroom.

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