Innovative Educational Technologies as the Tool of Soft Skills Development in the Context of Higher Education Transformation

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Original Article

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Abstract:

The research aims to assess the ways of professional and personal development of university students based on soft skills development using innovative educational technologies that comprehensively affect the educational process. The study aims to achieve this by solving the following tasks: conducting expert surveys (respondents are university teachers and students) to determine the most effective educational technologies for soft skills development and creating methodological materials.

The research uses the following methods: questionnaires, expert surveys, observations, and a pedagogical experiment (ascertaining, formative, summative).

The article considers the problem of improving teaching methods and techniques, modernization of organizational forms, and educational and methodological support for the soft skills development of university students, using the example of the Faculty of Social Sciences and Humanities of the West Ukrainian National University. The material of the study is the empirical experience of applying the educational process of the Faculty of Social Sciences and Humanities of the West Ukrainian National University, developing soft skills of students using innovative educational technologies within the framework of the Soft Skills School optional course. The experimental use of innovative educational technologies within the course mentioned, proved the students' interest in the problem of soft skills development, contributed to the development of their critical thinking, and increased the ability to apply knowledge in new situations, and developed creativity and intellectual capabilities of the students. The use of innovative technologies has several limitations, related mainly to procedural issues of their application in the educational process.

The article develops a discussion on soft skills as well as active and interactive teaching methods aimed at forming students' ability for self-development and self-learning for the effective implementation of possible scenarios of the trajectory of their professional development.

Introduction

The determining factor of the globalization process in the contemporary world is higher education, which is in the process of constant reformation, modernization, and adaptation to the market economy conditions (1). The use of human resources requires innovative models and development technologies in the higher education system (2; 3; 4; 5; 6). In January 2022, the European Commission outlined the focus of European education policy on the search for innovative university education strategies (7). This document identifies the need to adapt university education to the rapid evolution of graduate skills requirements (8). The modern labor market requires multifunctional specialists who can automate routine tasks (9; 10) and develop or create innovative products (11). Today, even the most capable specialists work inefficiently, especially in a team (12; 13; 14). We assume that this is not only because of a lack of meta-skills. Being absorbed in daily work, specialists do not notice evident changes in the subject area and society (15), do not know how to manage the impact of modern technologies on life (16), and are captured by behavioral patterns and stereotypes successfully used in the past, and do not understand that they are not effective in new, rapidly changing conditions. People are trying to do today's work with yesterday's tools. Therefore, the demand for specialists with multi-potential will remain relevant for many years. Employers will choose creative, cross-functional graduates who can adapt to changes and constantly strive to update their tools.

The demand for cross-disciplinarity has become not only a European but also a global trend that has not lost its relevance for several years (17). One topic combines issues of natural sciences and humanities (18): IT and psychology, medicine and events, natural sciences and PR, project management, and organizational psychology (19). For several years, there has been a demand for T-shaped specialists who are experts in at least one field but are professional and actively developing in related fields (20). Due to the development of digital transformation, communication skills such as change management, leadership, collaboration, and meta-skills such as mindfulness, emotional intelligence, flexibility, adaptability, and stress management have become in demand (21; 22; 64). According to Harvard University research, the development and availability of soft skills already determine the professional success of graduates by 85%, while hard skills only by 15%.

Despite the high demand from employers, working professionals improve their soft skills only to a small extent (23; 24). Therefore, they cannot meet the requirement of the century - possession of a set of non-specialized (25; 26), but essential for career and life success, soft skills that are responsible for high productivity and are cross-cutting, not related to a specific subject area (27; 28). Training graduates of higher education institutions based on the development of soft skills will become one of the tools for modernizing the higher education system. Nowadays, the university development strategy should consider the transition frominsoftacademic disciplines to a curriculum focused on developing students as holistic individuals with universal views.

Since the creation of the European Higher Education Area, approaches to learning at European universities have changed: students have achieved more academic freedom, and teachers have transitioned into facilitators of the educational process.

Modern students are representatives of Generation Z. They prefer teamwork (31), interactive learning, and active participation in the educational process, and are ready to learn in various educational environments with unlimited access to information (32). Generation Z chooses personalized, project-based, and practical learning approaches that are current with modern educational paradigms (33). Studies have shown the need to develop soft skills, including critical thinking, among Generation Z representatives (34), as they "do not always have their critical thinking well developed" (35; 36), have individual (in)resistance to digital media manipulation (37; 38), are often manipulated (39) and subsequently subjected to excessive workload and stress in the workplace (40; 41). According to K. Robinson, soft skills are essential for active and lifelong learning (42) and individual moral development (43).

Research Questions of the Study

The research aims to determine the best practices for using innovative educational tools to develop the soft skills of students of higher education institutions and the use of these practices in the educational process of the West Ukrainian National University. This research aims to achieve the following objectives:

- to establish how cross-cutting (universal) competencies are being developed in the higher education system today;
- to determine which soft skills are of particular relevance for university students in the context of society's transformation;
- to propose innovative educational tools that allow for taking into account the diversity of formal and informal educational practices in the development of soft skills of university students;
- to assess the level of development of soft skills among students who participated in the experimental study.

Literature review

The concept of soft skills

The concept of supra-professional skills is not new. It is discussed mainly in the context of ideas about internationalization of education and the European Education Area. In academic circles this idea is often described using terms "key competencies," "soft skills," "transversal skills," or "transferable skills." In rapidly changing contemporary environment, there is a high demand for both technological and digital skills, as well as soft skills. Both groups of skills are used in the professional sphere and personal life. With the increasing pace of digital transformation, they are becoming inseparable. Technological skills include digital competencies, digital literacy, working with digital services and platforms, and cyber security (44; 45). Soft skills are cognitive, social, and emotional skills, including creativity, critical thinking, interpretationof information, decision-making, and communication skills (46). In 2024, digital and soft skills have become even more correlated. The combination of skills increases the adaptability of graduates to rapid exchanges in the market, helps them to remain in demand and strive for continuous development.

M. Matteson and co-authors in their work "Soft skills: A phrase in search of meaning" defined soft skills as 'intra- and interpersonal (socio-emotional) skills' necessary for personal development, social participation, and success (46, p. 72). According to K. Stek and N. Schiele (2021), soft skills play a key role in knowledge application and cognitive skills in everyday life. They are even more important than professional skills, as they are a prerequisite for hard skills implementation (47). The theoretical analysis of the literature shows that soft skills are generally understood as a set of social and communication skills that allow for effective communication and teamwork. T. Wikle and T. Fagin define soft skills as "character traits, goals, motivations, and preferences". The authors note that in the business context, soft skills are a set of personal characteristics that increase the effectiveness of interaction and productivity in the workspace (48, p. 643). The essential characteristic in the definition of soft skills is that it is a set of competencies, personal qualities, behavioral models, and values (49) that allow you to choose and use the most appropriate knowledge and skills to solve professional and communication problems, interact constructively with other members of society, develop and achieve goals (50). These skills are required for various fields of activity.

Classification of soft skills

The list of soft skills used in business and pedagogical literature is rather extensive. Researchers classify them in different ways. Thus, J. Botke and co-authors propose six basic groups that underlie soft competencies: basic (fundamental, academic) skills; communication skills; conceptual (thinking skills); personal skills; skills related to the business world; and social and civic skills (51). Developing the theme of successful professional activity and the importance of soft skills, A. Llorens and co-authors identify 5 most important soft skills expected of potential and successful job candidates: social skills; communication skills; higher-order thinking skills (including problem-solving, critical thinking, and decision-making); self-control; positive self-concept (29), and even spirituality (38; 52). An extended list of soft skills includes the following elements: communication skills (building interaction with different people; mastery of business communication formats); social skills (performing various roles in professional activities; working independently and in a team; positioning oneself in society); managerial skills (ability to make independent, balanced decisions; analysis and forecasting; ability to search for resources); organizational (ability to manage own time, resources, development in general; goal setting; self-study, self-motivation); intelligence (27), as well as focus on health and healthy lifestyle (53).

Given the increasing complexity of professional tasks for various fields of activity, the question of measures and competencies necessary for the successful functioning of specialists today and tomorrow is relevant. It seems suitable to analyze the "competencies of the future" based on foreign and domestic research: "Partnership for 21st Century Learning", USA, (P21); international organization "Assessment and Training of 21st Century Skills'" (ATC21S); "International Society for Technology in Education" USA, (ISTE); international organization "European Union"(European Education Area (EUA)); International Organization for Economic Cooperation and Development, (OECD); Ministry of Education of Singapore (MOES). The ideas of these organizations are largely similar. Some of them are shown in Fig. 1.

Figure 1 Comparative analysis of the 21st-century key competencies defined by foreign organizations

P21	ATC21S	ISTE
Learning skills: 1. Critical thinking. 2. Creativity. 3. Communication.	*Thinking skills:* 1. Creativity. 2. Critical thinking. 3. Focus on learning.	*Creativity and innovations:* 1. Creative thinking 2. Knowledge creation. 3. Creating products and processes based on technology.
	Work skills: 1. Communication. 2. Cooperation.	*Work skills:* 1. Critical thinking. 2. Problem solving. 3. Making decisions.
		Communication and collaboration Use of digital tools for communication and collaboration.
Information media and technological skills: 1. Information literacy. 2. Media literacy. 3. Technological literacy.	*Tools for work:* 1. Information literacy. 2. Competence in information and computer technologies.	*Technological operations and concepts:* 1. Understanding of technological concepts. 2. Understand systems and operations.
Life and career skills: 1. Flexibility and adaptability. 2. Initiative and self-regulation. 3. Social and intercultural skills. 4. Responsibility. 5. Leadership.	*Living in the world:* 1. Local and global citizenship. 2. Life and career. 3. Personal and social responsibility.	*Computerized data processing* The use of digital tools to collect, process, and work with information.
		Digital citizenship Understanding humanitarian, cultural, and technological issues.

The latest research on the key competencies of a modern specialist belongs to Coursera. Their results are highlighted in *"The Job Skills of 2024, Harvard Business School Future Hub"*. The authors of the study identified the soft skills that modern employers pay special attention to: analytical thinking; creative thinking; resilience, flexibility, and agility; motivation and self-awareness; curiosity and lifelong learning; technological literacy; talent management; service orientation and customer service; and systemic thinking (54). Based on the analysis of the results of the studies, researchers presented their taxonomy of soft skills in Table 1.

The analysis of approaches to the soft skills classification allows us to highlight two essential points.

1. The process of soft skills formation is rather long. Presumably, having begun during studies in general secondary education institutions, these skills are actively improving in higher education during the mastery of general and professional cycle disciplines.
2. Soft skills development is facilitated by various teaching methods and technologies that aim to enhance both subject-specific knowledge and interdisciplinary skills.

Methods

The research methods included a theoretical analysis of the literature on the research topic, observation of the ways of organizing students' learning activities in higher education institutions, questionnaires, and experimental work using innovative educational technologies to develop students' soft skills. A long-term nature study conducted using general theoretical, empirical, and statistical research methods. Its re-

Table 1 Relevant soft skills that employers need.

Skills	Characteristics and Meaning
Communication skills	The ability of future professionals to adequately interact with other people, social groups, and society as a whole allows them to make the most productive decisions and overcome any difficulties in the communication process.
Curiosity	Curious people are actively interested in new products, monitor current trends related to their professional activities, ask questions, and try to find answers by immersing themselves in the subject area. This skill allows them to expand their networking and learn new subjects and phenomena.
Adaptability	The ability to quickly adapt to changing circumstances allows you to adopt and implement innovations faster.
Creativity	The potential of using imagination to generate new ideas, solve problems unconventionally, and find interesting approaches allows one to solve the most complex issues.
Stress resistance	A skill that allows you to work productively and make decisions despite uncertainty, risks, and lack of information.
Teamwork	Ability to interact effectively with other team members, build effective professional relationships, and achieve mutual results with a team.
Client focus	This skill allows you to understand the client's needs and solve their problems, as well as the ability to offer the product that is most in demand in the market.
Critical thinking	The ability to evaluate information and different situations objectively prevents mistakes, allows you to ask the right questions, and generates interesting ideas.
Emotional intelligence	Developed emotional intelligence helps understand the feelings and actions of other people, allows them to negotiate productively, respond adequately to unpleasant situations, and experience setbacks more easily.
Vital intelligence	Vital intelligence influences the energy level of a person. Lack of energy can negatively affect overall well-being and productivity, and lead to emotional burnout.
Work-life blend	An innovative behaviour model that offersintegration of professional responsibilities and personal life into a single harmonious lifestyle.

Source: own research

sultsare analyzed according to the objectives of each stage.

The effectiveness of innovative educational activities for soft skills development was revealed during the experimental work at West Ukrainian National University (WUNU) in the autumn semester of the 2024/25 academic year.

We used the following methods: questionnaire, expert survey, and observation. The authors of the article conducted a series of expert surveys (2024-2025) in which two groups of respondents took part:lecturers of WUNU (40 persons) and fourth-year students of the Faculty of Social Sciences and Humanities (98 persons).

The sample of respondents included students from various fields of study: Psychology, Journalism, Design, Information, Library and Archival Studies, Physical Training and Sports, and Social Work. The survey was conducted using Google Forms. The questionnaire survey included the following tasks:

- empirical confirmation of soft skills;
- identification of effective methods and orga-

nizational forms for the development of students' soft skills;
- creation of the *Soft Skills School* and its methodology.

The study complied with the following norms and principles of research ethics: respect for the human dignity of respondents; voluntary informed consent to the survey; confidentiality (anonymization of data) and protection of personal information; minimization of harm (no potential risks for research participants); prohibition of manipulation of data and research results; adherence to the principles of fairness, honesty, and impartiality of the study; refusal to selectively report results and distort them.

Results

Analysis of world experience showed two approaches to developing soft skills today. The first one is to teach directly, integrating individual courses (data analysis, project management, team building, stress management) within the variable component of the curriculum, like at Harvard University or Stanford Research Institute. The second approach is to use the potential of the disciplines studied, combined with non-formal education and extracurricular activities. This method is more commonly used at universities in Ukraine. However, it raises questions not only about "what to teach" (what is the most popular "set" of soft skills) but also about "how to teach" and "how to measure what a person has learned"?

The need for qualitative changes in the higher education system initiates the active introduction of practice-oriented teaching methods into the educational process (55; 56), aimed at increasing students' supersubject competencies. The formation of students' soft skills should be based on modern educational technologies and trends of digital transformation (57; 58), as well as by using social media in education (59; 60).

This study was conducted in several stages. The task of the theoretical stage was to analyze the psychological and pedagogical aspects of using the methods and organizational forms that ensure the effective development of students' soft skills. The task of the ascertaining stage of the study was to conduct a questionnaire survey of students to assess the importance of soft skills necessary for successful professional activity. The purpose of the formative stage was to implement the " Soft Skills School" which was "embedded" in students' independent work and provided for the updating of universal knowledge, additional formation of indicative bases of action, analysis, and solution of typical quasi-professional tasks requiring soft skills with fundamental consideration of their variability. The final stage included a final diagnostic section, expert evaluation of the results, and generalization of the results of the experimental work to assess the significance of the selected innovative educational technologies for the development of students' soft skills.

At the theoretical stage, a survey was conducted among students and teachers on the importance of methodological support, organizational forms, and teaching methods in forming the professional competence of technical university students. The results of the analysis of the two groups' responses are presented in Table 2.

The analysis of the results of the survey of the respondents (lecturers) shows that the following methods were highly rated: problem lecture and problem seminar, project method, "lecture for two" (two lecturers: an academic teacher and an employer), method of building a goal tree, solving case studies and foresight design. In the complex of different types of methodological support, e-learning modules, e-textbooks, and manuals were highly rated.The respondents identified the project-based organization of practical training, individual educational trajectories of mastering the discipline, and a virtual excursion in the complex organizational forms.

Based on the obtained results, an optional course, *Soft Skills School,* was prepared to develop the soft skills of the students participating in the pilot study. The course program included eight classes, each lasting three hours. To ensure the effectiveness of the optional course, we paid considerable attention to creating an informal atmosphere of interaction. To develop the students' soft skills, we used a set of innovative educational technologies in the optional course (Table 3).

Table 2 The importance of teaching methods, methodological support, and organizational forms (teachers and students) for soft skills development

Methods, methodological support, and organizational forms	Students		Lecturers	
	Average	Over 3 points (%)	Average	Over 3 points (%)
Teaching methods				
Problem lecture and problem seminar	5,0	91,3	4,8	85,6
Training and interactive learning technologies - simulators, trainers	4,7	83,8	4,8	87,6
Seminar-discussion	4,2	85,3	4,2	81,2
Master class within the framework of future professional activity	4,8	95,3	4,7	91,3
Brainstorming session	4,8	87,5	4,3	81,6
Traditional seminar	3,5	88,4	3,3	74,6
Gamification	4,6	89,2	4,7	92,8
Project method	4,9	94,6	4,9	82,5
Traditional lecture	3,0	96,3	4,5	90,6
"Lecture for two" (two lecturers: a teacher and an employer)	4,6	93,7	4,9	96,5
Building associative rules	4,6	90,8	4,6	89,5
Method of building a "goal tree"	4,9	95,2	4,9	94,3
Solving case studies	4,9	85,8	4,9	93,7
Role-playing (business, simulation) game	4,7	93,5	4,4	92,3
Foresight design	4,9	90,3	4,8	93,6
Methodological support				
Electronic textbooks and training manuals	4,8	88,3	4,8	89,5
Multimedia programs	4,7	95,8	4,6	89,3
Electronic training modules	4,8	88,9	4,8	88,5
Training computer programs	4,7	88,5	4,6	89,5
Electronic dictionaries	3,5	87,4	4,6	85,6
Organization forms				
Web conferences, web seminars	4,5	91,2	4,5	92,6
Video lectures	4,6	88,9	4,5	90,5
Electronic lectures	4,4	90,6	4,4	89,3
Online seminars	4,6	85,5	4,6	78,7
Online laboratories	4,7	90,3	4,5	89,6
Virtual excursions	4,8	89,6	4,9	96,5
Project organization of practical training	4,9	84,5	4,9	96,5
Individual educational trajectories of learning disciplines	4,9	97,5	4,8	94,5

Source: own research

Table 3 Innovative educational tools and developed soft skills

Developing soft skills	**Examples of the use of innovative educational technologies or their elements**
Technology of project activity *- development of individual creative abilities of students*	
Communication skills, creativity, planning, analytical thinking, judgment and decision-making, adaptability, flexibility, self-control, interpersonal skills, research skills, and teamwork.	Project "*Creation of a video*". The task is to create a video on a relevant topic, for example, "*My education is my future*", "*The Faculty of Social Sciences and Humanities is the best*", and "*A foreign language and my profession*". The video can be presented in any genre: a short film, a video clip, or animation, and the virtual platform for posting the video is the YouTube video hosting service. The presentation of the video in the classroom is evaluated according to the requirements for technical, linguistic, and artistic design. Project "*TheSocial Media*". The project is practice-oriented. The objective of the project is to develop a concept of a social network for professional purposes based on the experience of effective online communities: Facebook, Twitter, Instagram, and YouTube. The project involves creating a name and logo for the social network, defining marketing goals in social media, defining the target audience, setting your indicators (post coverage, clicks, hashtag effectiveness, etc.), analyzing competitors, and creating content.
Information and communication technologies provide changes and unlimited enrichment of educational content, integrated courses, Internet access, interactive teaching methods, and e-learning.	
self-management, time management, communication, multitasking, ability to plan and think strategically, ability to interact with others both in a team and via networking	*Various distance learning courses implemented on the Moodle LMS platform* involve posting materials and assignments for groups of students to be completed within a fixed time. *Google spreadsheets for joint work.* Completing tasks in pairs and mutually checking each other's work using the cross-assessment feature in Moodle LMS. *WhatsApp Messenger* groups are created for correspondence, conferences, and consultations using platforms like Zoom, MS Teams, and Google Meet. *The case-study method* is realized using an independent search for data from Internet resources.
Collaborative learning technology (teamwork, group work)	
ability to communicate, considering the position of the interlocutor, and organize cooperation	The *foresight methodology* is implemented during teamwork to identify the most important concepts of the future and develop tools for their further realization. *SWOT analysis and negotiation.*
E-learning	
social and communication skills, self-control	*Engaging in webinarsand online courses* to enhance communication skills via *Coursera, Google Classroom, Moodle,* and other platforms. Use of multimedia materials and Internet services to complete online tasks.

Source: own research

Table 4 Summarized results of the input diagnostics of students' soft skills development, %

Skills	Control group	Test Group
Soft skills of personal development		
Self-education skills	beginner – 40,2	beginner – 40,8
	intermediate– 59,8	intermediate – 59,2
	advanced – 0,0	advanced – 0,0
Self-management	beginner – 51,6	beginner – 53,2
	intermediate – 48,4	intermediate – 46,7
	advanced – 0,0	advanced – 0,0
Socio-communicationsoftskills		
Competencies of effective communication and interaction	beginner – 25,85	beginner – 25,75
	intermediate – 61,65	intermediate – 60,25
	advanced – 12,5	advanced – 14,0
Teamwork skills	beginner – 54,0	beginner – 53,0
	intermediate – 46,0	intermediate – 47,0
	advanced – 0,0	advanced – 0,0
Cognitive soft skills		
Creativity	beginner – 37,0	beginner – 39,0
	intermediate – 63,0	intermediate – 61,0
	advanced – 0,0	advanced – 0,0
Critical thinking	beginner – 27,25	beginner – 28,0
	intermediate – 50,25	intermediate – 49,0
	advanced – 22,5	advanced – 23,0
Overall level of soft skills development	beginner – 39,3	beginner – 39,2
	intermediate – 54,9	intermediate – 54,6
	advanced – 5,8	advanced – 6,2

Source: own research

The general principles of organizing a pedagogical experiment to test their impact on the effectiveness of students' soft skills development were as follows: the pedagogical experiment was designed traditionally with the involvement of a control group (CG) and a test group (TG). In the test group, a certain impact was purposefully carried out, whereas in the control group, it was not.

The organization of the research work required the development of a criterion-evaluation system. The relevant soft skills theoretically substantiated in the article are divided into three groups: soft skills of personal development (self-education skills, self-management), socio-communication soft skills (competencies of effective communication and interaction, teamwork skills), and cognitive soft skills (creativity, critical thinking). The study used a structured questionnaire with closed and open-ended questions. The questionnaire contained three blocks to identify three groups of soft skills.

The diagnostic results showed no significant differences in the data of the control and test groups, which indicates the objectivity and reliability of the empirical results. Bringing all the obtained empirical data to a single three-level scale made it possible to calculate the overall level of development of students' soft skills in three levels: beginner, intermediate, and advanced (Table 4).

Figure 2 Results of the input diagnostics of students' soft skills development summarized

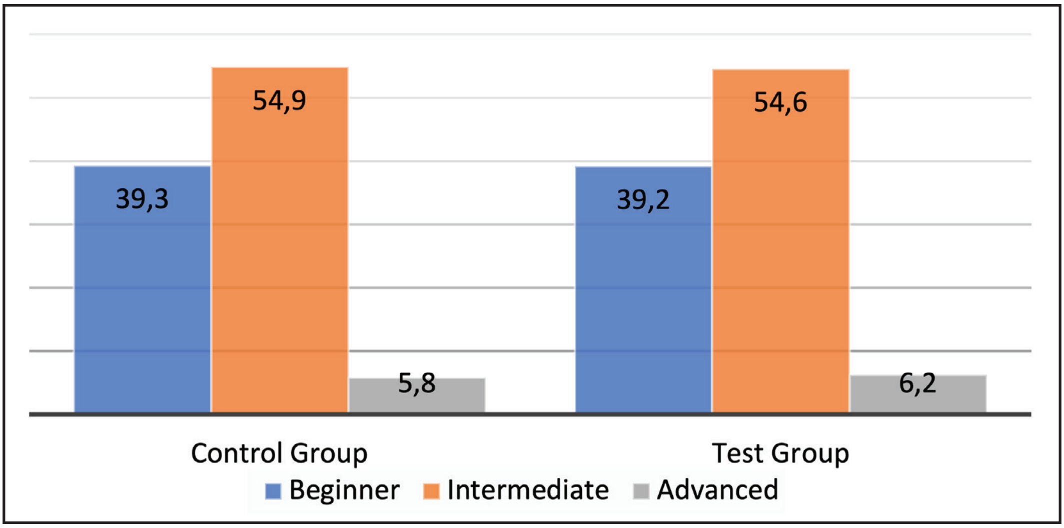
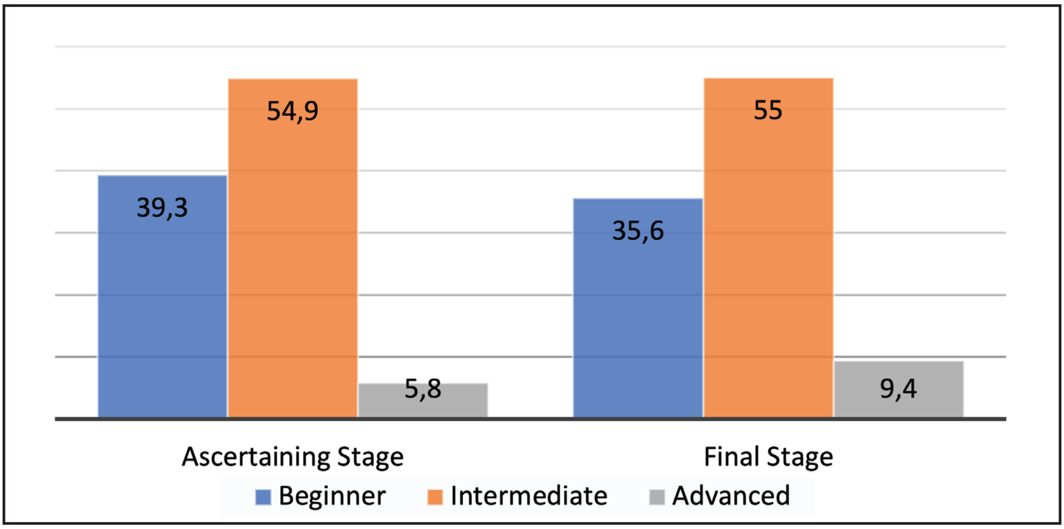


Figure 3 Comparison of the results of the control group at the ascertaining and final stages of experimental work,%



The data summarized in the table are in Figure 2 for clarity.

Processing the empirical data obtained during the final stage and summarizing it into a three-level scale according to the levels selected in the study (beginner, intermediate, advanced) made it possible to compare the final values with the results of the ascertaining stage (Table 5).

The results obtained within two stages of the research are presented in the diagrams in Figures 3 and 4, which show the dynamics of the phenomenon under study: the development of soft skills of the Western Ukrainian National University students.

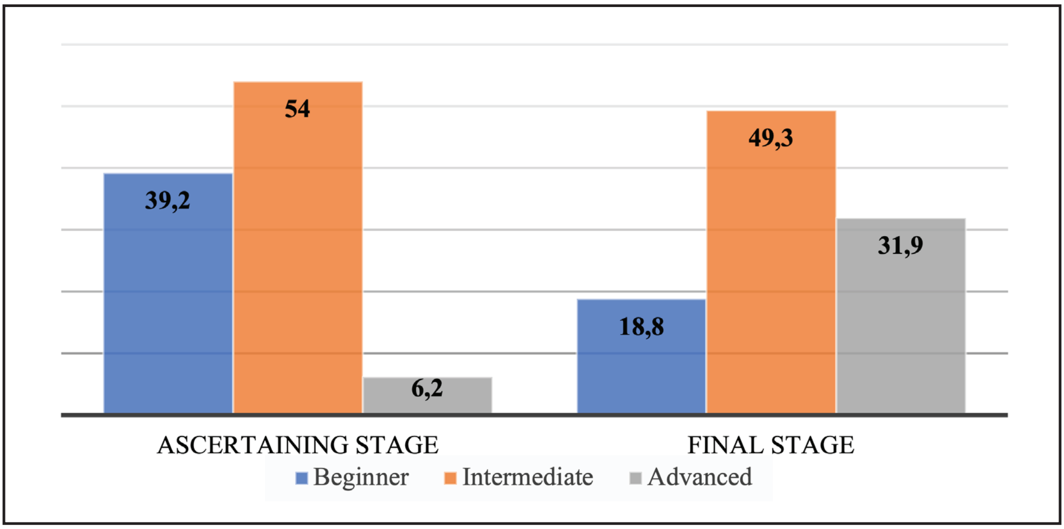
The analysis of Fig. 3 shows that the dynamics in the control group are practically not expressed: the beginner level of soft skills development at the ascertaining stage demonstrated 39.3%, whereas at the final stage, 35.6% of students. The percentage of students with an average level at the ascertaining stage was 54.9%,

Table 5 Summarized results of students' soft skills development

Skill level	Control group		Test Group	
	Ascertaining stage	Final stage	Ascertaining stage	Final stage
Soft skills in personality development				
Self-education skills				
beginner	40,20	35,90	40,80	15,60
intermediate	59,80	40,70	59,20	48,45
advanced	-	23,40	-	35,95
Self-management				
beginner	51,60	46,90	53,30	25,00
intermediate	48,40	51,60	46,70	44,00
advanced	-	1,50	-	31,00
Socio-communications of skills				
Competence in effective communication and interaction				
beginner	25,85	25,00	25,75	19,00
intermediate	61,65	67,00	60,25	50,00
advanced	12,50	8,00	14,00	31,00
Teamwork skills				
beginner	54,00	47,00	53,00	25,00
intermediate	46,00	53,00	47,00	44,00
advanced	-	-	-	31,00
Cognitive soft skills				
Creativity				
beginner	37,00	34,00	39,00	17,00
intermediate	63,00	66,00	61,00	69,00
advanced	-	-	-	14,00
Critical thinking				
beginner	27,25	25,00	28,00	11,00
intermediate	50,25	51,50	49,00	40,60
advanced	22,50	23,50	23,00	48,40
The general level of soft skills development				
beginner	39,30	35,60	39,20	18,80
intermediate	54,90	55,00	54,60	49,30
advanced	5,80	9,60	6,20	31,90

Source: own research

Figure 4 Comparison of the results of the test group at the ascertaining and final stages of experimental work, %



whereas at the final stage, 55%. An advanced level showed 5.8% of students at the assessment stage and 9.4% at the control stage. So, the traditionally organized educational process in higher education institutions does not give students a full opportunity to develop the soft skills needed in a dynamically changing world.

Fig. 4 shows that in the test group, the proportion of students with a beginner level decreased by half from 39.2% to 18.8%. The proportion of students who showed an intermediate level at the ascertaining and final stages differs slightly: 54.6% and 49.3%, respectively. At the same time, the proportion of students in the experimental group who showed a high level of soft skills development increased more than fivefold from 6.2% to 31.9%. Thus, the results confirm the validity of the research design and the hypothesis made during the study. As the results show, the educational process of higher education institutions has sufficient potential and resources for its purposeful organization to develop soft skills necessary in the contemporary world.

Discussion

In a highly competitive environment, soft skills are crucial levers for increasing the productivity of professionals and companies. A team consisting of professionals with developed soft skills will be more successful. The priority is the formation and improvement of the identified key soft skills in university education. It is possible when we take at least the following steps:

- systematic monitoring of the actual soft skills required by employers (conducting surveys of students after they have passed job interviews in their specialty, analyzing vacancies published by recruiters, inviting representatives of employers to universities, and more);
- develop and introduce special courses in the educational process to form and develop the necessary soft skills or make changes to the existing ones in the curriculum;
- Motivate students to permanent self-development.

Our experience, which develops the idea of using innovative educational technologies in the development of students' soft skills, has several distinctive features: optimization of the combination of traditional and innovation approaches to learning; integrative approach, which involves the preparation of courses that form panoramic thinking and develop meta-subject skills; comprehensive scientific, methodological, technological, information support and support for students' activities; teamwork: university teachers and students. In the technologies and forms of soft skills development, it is possible to move according to the model of reengineering the educational process, for example, by creating communication laboratories, project offices, teacher research groups, introducing non-linear schedules, holding various schools, and more.

Conclusions

Modern research proves that employers appreciate not only professional (hard skills) but also universal soft skills, which include a wide range of skills and abilities that increase the efficiency and effectiveness of a specialist's professional activities.

The study showed that:

1. Most students often do not have end-to-end soft skills, and there is a lack of understanding of the importance of soft skills.
2. The personnel training system is not ready for soft skills development. Blurred and insufficient development of vertical and horizontal links between individual components of the professional training process (goals, content, technologies, means, and forms), poor diversification of professional disciplines, excessive theorization, and detachment from modern requirements for expanding professional activities are the reasons for this.
3. Limited opportunities for application of various soft skills because of weak links between theoretical and practical training.
4. The in soft and mobile process of soft skills development in higher education institutions slows down the response to employers' requests.
5. Many modern interactive trends are realized only in business education and commercial courses.

It is evident that the development of soft skills largely depends on the chosen teaching methods and the orientation of the higher education system to implement modern teaching trends aimed at developing soft skills. At the same time, teaching practice shows that motivation, dedication, and active student participation are necessary to be competitive and in demand in the future. As evidenced by the results of experimental training and students' self-reflection, innovation and project activities based on modeling social interaction in a study group are a relevant and effective teaching method, ensuring the productivity of various tasks in the field of educational, educational, and cognitive, social and professionally oriented activities, promotes the formation of soft skills of future specialists, and also best meets the expectations of students themselves. However, the authors suggest that closer interaction with internship sites is needed to further learning activities and innovations in the educational process, closer to the specifics of professionalization. It makes it possible to bring the soft skills development of a particular student to an individual educational trajectory and the higher education institution to plan a learning trajectory.

In the prospect of developing students' soft skills, the following innovative educational technologies can be used: games (game-based learning - role-playing, business, situational, or others (61; 62); projects (within one discipline or interdisciplinary); introductory courses before the main study; educational blogging (63); business modeling; simulation models; remote laboratory; design competitions.

The article explores the essential issues that will influence the careers of future professionals. It addresses questions such as: What should new educational practices look like? What skills need to be developed for the future? How can we teach effectively today to achieve the desired outcomes? The authors aim to pinpoint areas where educational technologies can enhance soft skills anticipated to be in demand over the coming decades.

Limitations and implications for the research

The research's results can be disputed, as the experiment was a single-institution experience, and the number of respondents was small. The study results were achieved from only one group of sample respondents and experts. The quasi-experimental design of the study and the number of variables studied were also limitations of this research.

References

1 KOSTOPOULOS, G., KOTSIANTIS, S. (2022). Exploiting semi-supervised learning in the education field: A critical survey. *Advances in Machine Learning/Deep Learning-Based Technologies*, 23, 79-94 https://doi.org/10.1007/978-3-030-76794-5_5

2. AKTHER, J. (2020). Influence of UNESCO on the development of lifelong learning. *Open Journal of Social Sciences*, 8, 103–112. https://doi.org/10.4236/jss.2020.83010

3. ALAM, S., & HAMEED, A. (2023). Teaching Concerns in Higher Education: Impact of COVID-19 in Pedagogy. *Journal of Education, Culture and Society*, *14*(1), 318-332. https://doi.org/10.15503/jecs2023.1.318.332

4. PIDBUTSKA, N., KNYSH, A., CHEBAKOVA, Y., SHTUCHENKO, I., BABCHUK, O. (2022). Motivation Behind the Preference of Distance Education of Higher Education Students. *Journal of Education, Culture and Society*, *13*(1), 201-210. https://doi.org/10.15503/jecs2022.1.201.210

5. SHEREMET, A., BLASHCHUK, T., ISHCHUK, S. (2022). Mediation Principles in the Civil Society and Features of Their Application in the Educational Environment of Ukraine. *Journal of Education, Culture and Society*, *13* (2), 231-250. https://doi.org/10.15503/jecs2022.2.231.250

6. KONDRLA, P., MAKAN, F., KRALIK, R., GUTTESEN, K. (2024). The role of spiritual values in social work – the context of sustainability. *Clinical Social Work and Health Intervention*. 15(6), 120-129. 10.22359/cswhi_15_6_10.

7. EUROPEAN COMMISSION, DIRECTORATE-GENERAL FOR EDUCATION, YOUTH, SPORT, AND CULTURE. (2022). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions on a European strategy for universities [online], COM (2022) 16 final. https://education.ec.europa.eu/sites/default/files/2022-01/communication-european-strategy-for-universities.pdf

8. EUROPEAN COMMISSION (2022). Digital Education Action Plan. European Commission. https://education.ec.europa.eu/focus-topics/digital-education/action-plan

9. GOGER, A., PARCO, A., VEGAS, E. (2022). Learning and working in the digital age: Advancing opportunities and identifying the risks. Brookings.

10. ZIMNY, J., HARINGA, I., ROUBALOVA, M., AKIMJAKOVA, B., KRALIK, R. (2023). The relevance of therapeutic approaches in accompaniment for social work students with post-COVID-19 syndrome. *Acta Missiologica*, 17 (1), 96-106.

11. GARCÍA-MARTÍNEZ, J. A., GONZÁLEZ-SANMAMED, M., MUÑOZ-CARRIL, P. C. (2023). Lifelong learning and personal learning environments: a productive symbiosis in higher education. *Revista Complutense de Educacion*, 34 (1), 167-177.

12. SUJOVÁ, E., CIERNA, H., SIMANOV ˇ Á, L'., GEJDOŠ, P., ŠTEFKOVÁ, J. (2021). Soft Skills Integration into Business Processes Based on the Requirements of Employers – Approach for Sustainable Education. *Sustainability*, 13, 13807. http://doi.org/10.3390/su132413807

13. BUDAYOVÁ, Z., SVOBODA, M., KÓŠA, M., TUDOSE, C., MOLCHANOVA, I. I. (2022). Lifelong Learning and Development for Social Workers. *Journal of Education, Culture and Society*, *13*(2), 359-368. https://doi.org/10.15503/jecs2022.2.359.368

14. KONDRLA, P., TRSTENSKY, F., DATELINKA, A. (2023). The social teaching of the Church and the values of a sustainable society. *Acta Missiologica*, 17(2), 142-155.

15. PLANKA, T., OLAH, M., SLAŠŤAN, M., LESŇÁKOVÁ, A., ZÁMKOVÁ, V. (2024). The impact of the Syndrome of Professional Burnout on Work in Social Services facilities. *Clinical Social Work and Health Intervention*. 15(4). 116-128. 10.22359/cswhi_15_4_14.

16. BUDAYOVÁ, Z., PAVLIKOVÁ, M., SAMED AL-ADWAN, A., KLASNJA, K. (2022). The Impact of Modern Technologies on Life in a Pandemic Situation. *Journal of Education Culture and Society*,

13(2), 213–224 http://doi.org/10.15503/jecs2022.1.213.224

17. VOLD, T., KIØNIG, L.V. (2023). Hyflex learning as support for lifelong learning. *European Conference on e-Learning*. 22 (1), 358–363.
18. KONDRLA, P., LOJAN, R., MATURKANIČ, P., NICKOLAEVA BIRYUKOVA, Y., GONZÁLEZ MASTRAPA, E. (2023). The Philosophical Context of Curriculum Innovations with a Focus on Competence Development. *Journal of Education, Culture and Society*, 14(2), 78-92. https://doi.org/10.15503/jecs2023.2.78.92
19. CASTRO, L. M., TAMAYO, J. A., ARANGO, M. D. (2020). Digital Transformation in Higher Education Institutions: A Systematic Literature Review. *Sensors*, 20, 3291–3303.
20. PETLÁK, E., BIROVA, J. (2023). General Soft Skills and Sub-competencies Developing Plurilingual Intercultural Competence by Students´ Self-Reflective Understanding. *Journal of Education, Culture and Society*, 14(2), 257-267. https://doi.org/10.15503/jecs2023.2.257.267
21. FOUNG, W., YEH, Y., JAW, B. S. (2020). Talent management model in the digital age: strategic internal entrepreneurial mechanism. *In the 8th International Conference of Entrepreneurship and Business Management, Untar (ICEBM 2019)*. 202–206. https://doi.org/10.2991/aebmr.k.200626.037.
22. CHERNOUS, T., HANDZILEVSKA, H., BALASHOV, E., RATINSKA, O. (2024). Development of Emotional Competence through Music and Movement: Comparative Analysis of the Professional Educational Programs of Prospective Primary School Teachers in Ukraine and Austria. *Journal of Education, Culture and Society*, 15(2), 665-682. https://doi.org/10.15503/jecs2024.2.665.682
23. TKACOVA, H., PAVLIKOVA, M. (2024). Youth and Their Current Concerns – Social Work and Media as Tools of Intervention. *Clinical Social Work and Health Intervention*, 15 (6), 96–109.
24. KHONAMRI, F., PODPERA, R., KURILENKO, V., OBLOBERDIYEVNA, D. S. (2024). The Predictive Role of Teaching Experience in Teachers' Implementation of Metacognitive Knowledge. *Journal of Education, Culture and Society*, *15*(2), 237-247. https://doi.org/10.15503/jecs2024.2.237.247
25. BEN-SHALOM, U., HAJAJ, C., DAVIDOVITCH, N., BERGER, C. (2023). Online Temporary Learning Groups in Higher Education – Interactions, Compensation, and Maximisation of Achievements in an Israeli Case Study. *Journal of Education, Culture and Society*, *14*(1), 619-633. https://doi.org/10.15503/jecs2023.1.619.633
26. OLAH, M., MACKINOVA, M., PLANKA, T., WIMMEROVA, S. (2024). Applying language competencies when working with Ukrainian Refugees in Helping Professions. *Clinical Social Work and Health Intervention*, 15 (2). 57-65. 10.22359/cswhi_15_2_09.
27. SHRADHANJALI, S. (2021). Developing soft skills in engineering students with the COVID-19 pandemic: Challenges and limitations of digital classes. In Proceedings of the *International Conference on Best Innovative Teaching Strategies*, ICONBITS, Online, 29–31 July 2021. http://doi.org/10.2139/ssrn.4026804
28. KONDRLA, P., MAKAN, F., KRALIK, R., GUTTESEN, K. (2024). The Role of Spiritual Values in Social Work – The Context of Sustainability. *Clinical Social Work and Health Intervention*, 15 (6), 96–109.
29. LLORENS, A., BERBEGAL-MIRABENT, J., LLINÀS-AUDET, X. (2017). Aligning professional skills and active learning methods: An application for information and communications technology engineering. *European Journal of Engineering Education*, *42* (4), 382–395. https://doi.org/10.1080/03043797.2016.1189880
30. SVEC, M., MESZAROS, P., HORECKY, J. (2024). On-call duty of medical Professionals – Changing the Paradigm of its Assessment as a Result of new Decisions of the Court of Justice of the European Union. *Clinical Social Work and Health Intervention*, 15 (6), 87–95.

31. KIANI, A., SOLEYMANI, Z., ALISHAFAHI, M. (2024). Comparative study of the components of social romanticism and modernism. *Acta Missiologica*, 18 (2), 191–203.
32. KOZINSKI, S. (2017). How Generation Z is shaping the change in education. https://www.forbes.com/sites/sievakozinsky/2017/07/24/how-generation-z-is-shaping-the-change-in-education/#304059746520
33. REILLY, C., REEVES, T. C. (2023). Tracking transdisciplinary skills in the design of online courses: A design-based research study. *Computers & Education*, *204*, 104867. https://doi.org/10.1016/j.compedu.2023.104867
34. TKACOVA, H., PAVLIKOVA, M., AZIZI, M., SOTIROFSKI K. (2023). Oversharing of content online by children during the holidays and parental control. *Acta Missiologica*, 17 (2), 60–74.
35. CHAN, C. K. Y., LEE, K. K. (2023). The AI generation gap: Are Gen Z students more interested in adopting generative AI such as ChatGPT in teaching and learning than their Gen X and millennial generation teachers? *Smart Learning Environments*, *10*(1), 60. https://doi.org/10.1186/s40561-023-00269-3
36. LESKOVÁ, A., LENGHART, P. (2023). Post-Covid Media Behaviour Patterns of the Generation Z Members in Slovakia. *Journal of Education, Culture and Society*, *14*(1), 503-513. https://doi.org/10.15503/jecs2023.1.503.513
37. TKÁCOVÁ, H., PAVLÍKOVÁ, M., STRANOVSKÁ, E., KRÁLIK, R. (2023). Individual (Non) Resilience of University Students to Digital Media Manipulation after COVID-19 (Case Study of Slovak Initiatives). *Int. J. Environ. Res. Public Health*, *20* (2), 1605; https://doi.org/10.3390/ijerph20021605
38. PETROVIČ, F., GUTTESEN, K., MURGAS, F., KRALIK, R. (2024). The impact of anxiety and depression on the quality of life of the university students: the Slovak experience. *Clinical Social Work and Health Intervention*, 15(6), 54-74. 10.22359/cswhi_15_6_05.
39. SVOBODA, M., MEDZIHORSKY, S., GRUBER, J., JANACKOVA, L., SURAB, M., KRALIK, R. (2024). Manipulation as a risk factor for psycho-social health. *Acta Missiologica*, 18 (1), 43–54.
40. VALACHOVA, K., SHCHERBIAK, I., PODPERA, R., PAVLIKOVA, M. (2024). Workload and stress experienced by lawyers and social workers in the working environment. Stress management in social workers. *Acta Missiologica*, 18 (1), 92–102.
41. BUZZALOVA, S., VANSAC, P., TOMANEK, P., ROTTERMUND, J. (2024).Mental Health and Work-Life Balance among Workers in Social Services. *Clinical Social Work and Health Intervention*, 15 (5), 5-15. DOI: 10.22359/cswhi_15_5_02
42. ROBINSON, K. (2022). *Imagine if: Creating a future for us all*. Penguin Books. ISBN. 9780143134169.
43. KRÁLIK, R., MÁHRIK, T. (2019). Interpersonal relationships as the basis of student moral formation. *ICERI2019 Proceedings*, 8896-8900.
44. SOOMRO, M. A., HIZAM-HANAFIAH, M., ABDULLAH, N. L. (2020). Digital readiness model: A systematic literature review. *Compusoft*, 9 (3), 3596–3605.
45. SHYSHAK, A., CHAIKA, V., SHCHERBIAK, I., GAŽIOVÁ, M., TVRDON, M. (2024). Forming the Ability of Younger Students to Behave Safely on the Internet. *Journal of Education, Culture and Society,* 15(1), 333–347. https://doi.org/10.15503/jecs2024.1.333.347
46. MATTESON M. L., ANDERSON L., BOYDEN, C. (2016). Soft skills: A phrase in search of meaning. *Libraries and the Academy*, 16 (1), 71–88. https://doi.org/10.1353/pla.2016.0009
47. STEK, K., SCHIELE, H. (2021). How to train supply managers – necessary and sufficient purchasing skills leading to success. *Journal of Purchasing and Supply Management, in press*. 100700. http://doi.org10.1016/j.pursup.2021.100700.
48. WIKLE, T. A., FAGIN, T. D. (2014). Hard and soft skills in preparing GIS professionals: Comparing perceptions of employ-

ers and educators. *Trans. Gis*, 19, 641–652. http://doi.org/10.1111/tgis.12126
49. YANKOVSKA, Z., MARCHUK, L., RARYTSKYI, O. (2022). Value Orientations of Journalism Students in the Context of their Academic Training. *Journal of Education, Culture and Society*, *13*(2), 485-500. https://doi.org/10.15503/jecs2022.2.485.500
50. FILA, M., TOTHOVA, V., GULACSI, L., AL-ADWAN, A., KRALIK, R. (2024). Influence of external and internal factors on human direction. *Acta Missiologica*, 18 (2), 231–241.
51. BOTKE, J. A., JANSEN, P. G., KHAPOVA, S. N., TIMS, M. (2018). Work Factors Influencing the Transfer Stages of Soft Skills Training: A Literature Review. *Educational Research Review,* 24: 130-147. doi:https://doi.org/10.1016/j.edurev.2018.04.001
52. MURGAS, F., PODZIMEK, M., PETROVIC, F., TIRPAKOVA, A., KRALIK, R. (2023). The impact of religiosity on quality of life. *Acta Missiologica*, 17 (2), 169–186.
53. PETROVIC, F., MURGAS, F., KRALIK, R. (2023). Food, exercise, and lifestyle are predictors of a hedonic or eudaimonic quality of life in university students. *Acta Missiologica*, 17 (2), 99–114.
54. RUSSELL, M. (2024). The Top Skills Employers Seek Have Nothing to Do with Technology. *Harvard Business Publishing.* Retrieved from: https://professional.dce.harvard.edu/blog/the-top-skills-employers-seek-have-nothing-to-do-with-technology/
55. DERVISHAJ, A., PRESI, O. (2024). Digital Creative Methods Contribute to Teaching Through Collaborative Schemes. *Journal of Education, Culture and Society*, *15*(1), 453-471. https://doi.org/10.15503/jecs2024.1.453.471
56. TARAJ, M., KARDIS, M., JENISOVÁ, Z., BAJAN, D., KURILENKO, V. (2023). Lifelong and further education for social workers. *Acta Missiologica*, 17 (1), 182–193.
57. MILLER, R. (2018). Transforming the future: Anticipation in the 21st century, New York: Routledge. https://doi.org/10.4324/9781351048002
58. CERNEK, M., JUSKO, P., SHCHERBIAK, I., SLIWA, S. (2023). Distance learning at universities in central and eastern Europe during the COVID-19 pandemic: a pilot comparative study. *Acta Missiologica*, 17 (1), 166–182.
59. TKACOVÁ, H., KRÁLIK, R., TVRDOŇ, M., JENISOVÁ, Z., MARTIN, J. G. (2022). Credibility and Involvement of social media in education – Recommendations for mitigating the negative effects of the pandemic among high school students. *Int. J. Environ. Res. Public Health*, *19*, 2767. https://doi.org/10.3390/ijerph19052767
60. MAGO, Z., WOJCIECHOWSKI, ŁUKASZ P., BALÁŽIKOVÁ, M., SHELTON, A. J. (2023). Learning by Playing. A Case Study of the Education in Photography by Digital Games. *Journal of Education, Culture and Society*, 14(1), 465-479. https://doi.org/10.15503/jecs2023.1.465.479
61. RUDENSKYI, R., PYSARCHUK, O., SHCHERBIAK, I., AKIMJAKOVÁ, B., MINAROVICOVA, K. (2024). Humorous Potential of Board Games for Children of Senior Preschool Age. *Journal of Education, Culture and Society,* 15(2), 267–285.https://doi.org/10.15503/jecs2024.2.267.285
62. RADOMSKA, V., PONKALO, S. (2023). Reflections on War in the Creative Context of Design Education in Ukraine. *Journal of Education, Culture and Society*, *14*(1), 551-567. https://doi.org/10.15503/jecs2023.1.551.567
63. SHCHERBIAK, I., BINYTSKA, K., KOSTENKO, D., SIDLO, M., CIESKO, P. (2024). The structural-functional mission model of students' resilience formation in war conditions in Ukraine. *Acta Missiologica*, 18 (1), 124–137.
64. TKACOVA, H., PAVLIKOVA, M., YOCHANNA, M. (2025). Digital Benefits to Sustainable Presence: A Qualitative Study on Seniors' Use of Social Networks to Support Their Social Participation, *Clinical Social Work and Health Intervention*. 16(1-2), 146-159.