FEATURES OF THE ORGANIZATION OF THE EDUCATIONAL PROCESS IN UKRAINIAN UNIVERSITIES IN THE CONDITIONS OF WAR: PUBLIC CHALLENGES AND REALITIES

OLENA BUDNYK

ОСОБЛИВОСТІ ОРГАНІЗАЦІЇ ОСВІТНЬОГО ПРОЦЕСУ В УКРАЇНСЬКИХ УНІВЕРСИТЕТАХ В УМОВАХ ВІЙНИ: СУСПІЛЬНІ ВИКЛИКИ ТА РЕАЛІЇ

ОЛЕНА БУДНИК

Resume.

The article defines the relevance of the development and support of educational innovation processes and the peculiarities of the organization of university education in Ukraine during the difficult period of the Russian military aggression. The experience of distance education of Ukrainian students in wartime conditions is substantiated, in particular, the creation of special educational projects: online lessons, video lessons on YouTube and national TV; International Ukrainian School (for temporarily displaced persons abroad), All-Ukrainian Online School with the support of the Ministry of Education and Science of Ukraine, etc.

The peculiarities of distance learning in the conditions of the Russian-Ukrainian war as a large-scale innovation in the activities of universities are presented, and the ways of using digital resources and tools in educational activities are outlined. The management aspect of the organization of the educational process in university education is substantiated. Emphasis is placed on the necessity to use effective planning of an innovative strategy for the development of an educational institution, the management focus on qualitatively new changes, psychological-pedagogical team interaction based on empathy and partnership, the formation of a common vision of the directions of professional progress of a modern university. The effectiveness of the pedagogy of partnership is proven and an example of the solidarity of Ukrainian universities in the conditions of the russian military aggression is presented.

The results of a survey of higher education staff (146 respondents from different regions of Ukraine) are presented regarding their understanding of the current issues of technologization of education, the organization of distance learning, and the necessity to use educational innovations in the conditions of war. The innovative potential of digital education for improving learning/teaching methods in higher education institutions, as well as teachers' ability to vary and be mobile in responding to social challenges of technology development, and socio-economic and military-political situation in the country, is emphasized.

Keywords: pedagogy of partnership, innovations in wartime, distance education, university solidarity, information war, educational management in wartime.

Резюме.

У статті визначено актуальність розвитку та підтримки освітніх інноваційних процесів та охарактеризовано особливості організації навчання в університетах в Україні у складний період російської військової агресії. Обґрунтовано досвід дистанційного навчання українських здобувачів

освіти в умовах війни, зокрема створення спеціальних освітніх проєктів: уроки онлайн, відеоуроки на YouTube і національному телебаченні; Міжнародна української школа (для тимчасово переміщених за межі країни осіб), Всеукраїнська школа онлайн за підтримки Міністерства освіти і науки України та ін.

Представлено особливості дистанційного навчання в умовах російсько-української війни як масштабної інновації у діяльності університетів, окреслено шляхи використання цифрових ресурсів та інструментів у навчальній діяльності. Обґрунтовано управлінський аспект організації освітнього процесу в університетській освіті. Акцентовано на необхідності ефективного планування інноваційної стратегії розвитку закладу освіти, спрямованості його керівника на якісно нові зміни, психолого-педагогічній взаємодії у колективі на засадах емпатії і партнерства, формуванні спільного бачення напрямів прогресивного професійного поступу сучасного університету. Доведено дієвість педагогіки партнерства і презентовано приклад солідарності українських університетів в умовах російської військової агресії.

Подано результати опитування педагогів вищих навчальних закладів, в якому взяло участь 146 респондентів із різних реґіонів України щодо розуміння ними актуальних питань технологізації освіти, організації дистанційного навчання, необхідності використання освітніх інновацій в умовах воєнного часу. Наголошено на інноваційному потенціалі цифрової освіти для вдосконалення методик навчання / викладання у закладах вищої освіти, а також здатності педагогів до варіативності та мобільності щодо реагування на суспільні виклики розвитку технологій, соціально-економічної та військово-політичної ситуації в країні.

Ключові слова: педагогіка партнерства, інновації в умовах війни, дистанційна освіта, солідарність університетів, інформаційна війна, освітній менеджмент у воєнний час.

1. Problem statement

Today, Ukrainian education has to function at a specific time, wartime, because of the current large-scale Russian aggression. Educational institutions in most regions of the country continue to work remotely. In September 2022, some educational institutions are allowed to switch to offline learning, provided they have a security passport. In case students feel unsafe and fear full-time education, they can choose any form – distance, individual, or externship.

In higher education institutions, a mixed (blended) training option is also considered, when some disciplines are taught offline, and others – online. At the same time, we will develop a new experience of a comfortable educational environment under the existing war circumstances, namely: creating safe shelters (bomb shelters), providing signs of evacuation in case of air alert, evacuation schemes, estimated evacuation time, informing all students and institution employees, etc. These are new challenges that Ukrainian educators are facing in the XXst century so that our educational front continues to work in the most comfortable conditions for the acquisition of new knowledge.

These conditions require a variable approach to the organization of educational processes, rapid adaptation to teaching, including its continuation in shelters, as well as the introduction of pedagogical innovations for face-to-face and distance learning.

Accordingly, social challenges require a new teacher, capable of change, and innovation based on co-creation, cooperation, humanity, and tolerance for every student. Similar requirements apply to students of pedagogical universities. Today, the emphasis on universal priorities has strengthened the values of democracy, freedom, humanity, and responsibility in education, and thus – Ukraine's integration into the European Community. The psychological factor of the educational community is important – a conscious European choice, the establishment of European identity in Ukrainian society, and the national self-identification of the country's citizens. Therefore, innovation in the realities of war involves a focus on universal and national values in education, and teachers' desire to study the best world (European) experience of teaching or education. These and other aspects of innovation in education in Ukraine at different levels of its understanding and implementation will be covered in this article.

The research task is to analyze innovative approaches to the organization of the educational process in world

(European) practice and to determine the possibilities of their implementation in educational institutions of Ukraine in the conditions of Russian military aggression; to prove the expediency of using distance learning technologies in the work of educational institutions in modern conditions; to present the results of an empirical study on the readiness of Ukrainian teachers to implement digital innovations in professional activities, taking into account social challenges and the realities of war.

2. Instrument and Procedures of Research

As a result of the research, a questionnaire was developed for conducting an online survey for teachers, which contained questions of a theoretical and practical nature. The research at its various stages covered 146 respondents from different regions of Ukraine. The choice of the studied sample was random since the questionnaire was sent to various educational institutions, including those forcibly displaced to other territories of Ukraine during the wartime period. The survey was conducted online in May 2022. The survey was anonymous. The respondents were provided with multiple-choice questions. The respondents, secondary school teachers, and university professors helped to collect practical material regarding their understanding of the essence of the main research concepts, the relevance, and the necessity of using educational innovations, in particular digital technologies, in remote education of children in wartime conditions. The statistical analyses were prepared based on data obtained from the surveys. Considerable attention was paid to their experience of using specific e-resources in the educational process.

3. The innovative potential of digital education

In current conditions, when most countries of the world have already recovered from the coronavirus pandemic and are gradually moving to offline training, all institutions in Ukraine continue to work remotely due to Russia's military invasion. Alternative learning as a challenge of today is digital education, it is important to emphasize digital culture, digital literacy, and competence of all participants in the educational process. After all, digital culture and human thinking affect learning outcomes, requiring the development of pedagogical innovations (Rosen, 2010). The realities of the war led to the creation of special educational projects in Ukraine so that children could continue their education even during martial law. These are online and video lessons on YouTube; for students evacuated to other countries, the programs of the International Ukrainian School, and relevant online resources are offered (for example, the All-Ukrainian Online School website, which contains teaching materials for secondary school students). In addition, Ukrainian TV is involved in the educational process, which systematically broadcasts video lessons for 5-11 grade students within the project "Learning without borders" with the support of the Ministry of Education and Science of Ukraine (Learning without borders, 2022). Thus, the innovative potential of digital education is growing, improving teaching and learning methods, and technologies for working with students.

Since the beginning of the war, the International Ukrainian School of the Ministry of Education and Science of Ukraine (external study on an individual basis) has also started operating in Ukraine. It is also a kind of innovation influenced by social realities (International Ukrainian School, 2022). On the website of this school, you can find programs for independent work with links to electronic textbooks and didactic/multimedia materials for different classes and grades.

Today, the world community also helps Ukrainian teachers who, due to objective reasons, left their schools and cannot work online. 188 teachers from different countries became volunteer teachers: Canada, Italy, Turkey, Iceland, the USA, and Australia. Such world educational stars, as Howard Gardner, Barbara Oakley, Esther Wojcicki, Gordon Newfeld, and many others consider it an honor to hold webinars for Ukrainian educators (One hundred days of war, 2022). Through joint efforts, the experience of "How not to lose the national education system in the war conditions" has been accumulated, and the possibilities of social and psychological support of citizens are used.

The system of postgraduate and higher education in Ukraine also provides distance learning, but admission to undergraduate, bachelor's, and master's degrees is carried out especially, without the traditional use of external independent assessment, a single entrance exam, and a single professional entrance test. The current situation in the Ukrainian education system is a testament to the ability of teachers, students, the government, and the community to respond to changes and challenges of real life and to introduce new forms and methods of working with digital technologies and resources in distance work.

However, digital education is not only necessary in emergencies (wars, pandemics, etc.). It determines the quality of education and the implementation of educational innovations.

The effectiveness of digital educational technologies is usually evaluated by the following indicators: "improved and enhanced teaching and learning; digital maturation, including tackling the first and second digital divide; data-driven decision making and evidence-based education; and AI in education" (Gabriel et al, 2022).

A study presented in the Apple Classrooms of Tomorrow research (ACOT) (Apple, 1991) identified five steps in integrating technologies into teaching practice – representing the entry of digital culture into the teaching-learning process: exposure, adoption, adaptation, ownership, and innovation. This demonstrates that pedagogical innovation is part of a process that demands technological use that may initially be limited, but that creative integration of digital technologies in the learning process can enhance efficient and engaging pedagogical practices (Flávia Angeli Ghisi Nielsen, et al., 2019).

The results of our study show that more than a third of teachers are convinced that "digital education is based on the concept of digitalization and involves the replacement of special programs" (37.5%), and the priority and effectiveness of learning depend on a successful combination of online and offline technologies (blended learning), 8%), non-formal education through online learning (12.5%); use of ICT for distance learning (16.7%).

In the context of the European Higher Education Area, various possibilities of information technologies are considered today, and active methods of teaching students are introduced, which motivate them to creative research, and non-standard decision-making, as opposed to traditional lectures or seminars of reproductive nature (Lord, 1997). Therefore, today the problem of acquiring competencies and personal abilities in e-learning technologies as a necessary condition for their continuous professional development, as well as readiness to use digital resources and tools, especially in remote rural schools, is relevant (Budnyk, Matveieva, Fomin, 2022).

To the questionnaire "What digital resources do you use most often in working with students?" we got 98 responses from high school educators. Of course, the coronavirus pandemic has led to the transition to distance learning for a long time, which means that universities have created some digital and logistical support to work with students online (distance learning platforms, e-libraries, e-journals, e-classrooms for virtual laboratory experiments, etc.).

Russia's military invasion of Ukraine (February 24, 2022) forced all educational institutions to return to distance work. And the use of digital resources and tools for communication with students is the creativity and every innovative teacher's autonomy.

The following digital tools are most often used in the educational process of Ukrainian universities: Kahoot (24,5%), QR-code (50%), Padlet (15,3%), Maid Map (10,2%), Wordwall (12,2%), Mentimeter (10,2%) та ін.

According to the study, 34.7% of high school teachers fully support distance learning, and 63.3% partially approve of it due to the lack of offline communication, difficulties in objective evaluation of laboratory work and experiments, as well as creative projects, etc.

The important nowadays problem for educational institutions not only in Ukraine but also in many countries around the world is "developing support materials, usually commissioned by teachers, that can enhance the learning process", and "using data science to understand online experiences of students" (Flávia Angeli Ghisi Nielsen, et al., 2019). After all, in the line of innovation, first of all, it is necessary to improve organizational and methodological tools, methods, and forms of pedagogical work for the development of critical thinking, skills of dialogic learning, project teamwork, inquiry-based learning, etc. For this purpose, the latest technologies must be adapted from the content of educational programs, and in addition, we should practice brainstorming sessions to create new teaching tools.

Olena Budnyk:

Features of the organization of the educational process in Ukrainian universities in the conditions of war: public challenges and realities

4. Technologization of higher education and the teacher's spiritual development

In the world of global digitization and technical progress, a new society is formed through the development of technologies (computer, cyber, or nano-technologies), which changes the world of human values and priorities, and the technological approach in education is gaining more and more popularity (Reinsfield, 2020). Educational technologies (problem-based learning, inquiry-based learning, game technologies, technologies of distance learning, etc.) are aimed at optimizing pedagogical tools, methods, and forms of organization of education and training, obtaining the highest efficiency, learning results with minimal expenditure of time, human and technological resources, etc.

According to the interviewed teachers, technologization involves the final result of the pedagogical activity (8.3%), strict adherence to the content and sequence of the stages of the innovation introduction (54.2%), the ability of the educational institution to create and implement certain innovations (16.7%), readiness for a pedagogical experiment and corresponding risks (20.8%). At the same time, we are increasingly operating with the concept of "educational services", "quality of provision of educational services", and "measurement of learning results", which is also in a certain way connected with "technology of education" and the impact of the virtual world on a person. Therefore, the issue of formation and development of spiritual values, personality education based on humanity, empathy, tolerance, honesty, benevolence, etc. (Rembierz, 2021b), when it comes to online or offline learning, the interaction of participants in educational process in the virtual world.

"*Watching the destructive consequences of the pandemic, we observe... a revaluation in the world of human values, which is happening at a frantic pace: what is valued and prioritized in activity as something especially valuable, more essential than anything else... The invasion of the world of values creates and strengthens as well as fundamental conflicts of values regarding which choices must be made that cannot be repeated...*" (Rembierz, 2021c).

Regarding *the development of a student's or teacher's personality*, when we are dealing with distance learning, let's consider M. Nowak's interpretation of this concept: "*...the process of progressive and constant changes that accompany a person throughout his / her life, affecting both his/her personality and manifesting behavior*", therefore "*development always indicates a certain growth, the transformation of reality, the transformation of things, opinions, ideas, culture, humanity and actions*" (Nowak, 2015). It is also about the development of a person's critical thinking, the emotional intelligence, teaching a child to distinguish situations "*in which you have to fight against manifestations of stupidity and try to strive for wisdom*" (Rembierz, 2021a).

Digital education should serve as a means of developing the spiritual creativity of an individual, which H. Vasianovych vividly describes: "*...Spiritual creativity is an immutable socio-cultural value of an individual and society. Its real manifestation, formation, and functioning take place under the conditions of socio-economic and spiritual freedom, and under these conditions, it can be an important means of development of both the individual and society as a whole*" (Vasianovych, 2014).

Actually, these questions are extremely important today, when behind the world of virtuality there is sometimes a kind of spiritual and ideological vacuum, which is often associated with a crisis of values and insufficient mastering of a new socio-spiritual state. The absence of a spiritual ideal not only creates spiritual apathy but also reduces general social activity, inhibits the expression of creativity, and reduces young people's interest in printed books, art, meaningful leisure, culture, etc.

"*The spiritual and moral sense of using ICT solves the following tasks: students' involvement in spiritual and moral values (faith, love, freedom, gratitude, mercy); awakening and development of moral feelings (shame, compassion, sincerity, tolerance); formation and development of moral will (ability to serve good and resist evil, readiness to overcome life challenges and resist temptations, striving for spiritual self-improvement); encouraging moral behavior (obedience, empathy, family, and Motherland)*" (Vasianovych, 2014).

Development education notes M. Nowak, in addition to theoretical models, changes over time and takes on a different form depending on trends in the world, in a specific region or country... (Nowak, 2015, p. 35). Therefore, in fact, digital education should be focused on human rights, spiritual values, diversity, tolerance, nationality, and multiculturalism.

The results of the teachers' survey proved the necessity to use personally-oriented learning technologies in practice, especially in war conditions, when a significant part of students experience stress, emotional disorders, anxiety, worries, etc. More than half of the respondents indicate the need for a systematic analysis of the student's own and other people's actions in the direction of personally oriented technology (54.2%), a significant part (45.8%) consider it useful to create emotionally enriched educational situations on purpose, to use empathy as a psychological mechanism in learning (37.5%), orientation to personal interests and development features in the use of ICT in distance education (29.2%) and others. However, the largest number of respondents (70.8%) consider developing communication, constructive exchange of information, dialogic speech skills, and interactivity to be an effective principle of person-oriented education.

5. Pedagogy of partnership and solidarity of Ukrainian universities under conditions of Russian military aggression

The pedagogical partnership serves as an important aspect in the organization of the educational process in Ukrainian universities during the war.

The key principles of the pedagogy of partnership:

- Respect for personality;
- Benevolence and a positive attitude;
- Confidence in relationships;
- Dialogue, interaction, and mutual respect;
- Distributed leadership (proactive behaviors, the right of choice and taking responsibility for it, the horizontality of connections);
- Principles of social partnership (equality of parties, acceptance of responsibilities, obligation to fulfill agreements) (The New Ukrainian School, 2016).

In educational institutions in New Zealand, programs providing a pedagogical partnership between secondary school teachers and university educators were launched Fig 1. Such practices have been successfully implemented in many progressive countries in the last century (Sirotnik, & Goodlad, 1988). "School and university staff members valued working together as professional development for all partners, as a potential avenue for joint research, and as a platform to enhance student teacher's preparedness for their first classroom" (Bernay, Stringer, Milne, et al., 2020).
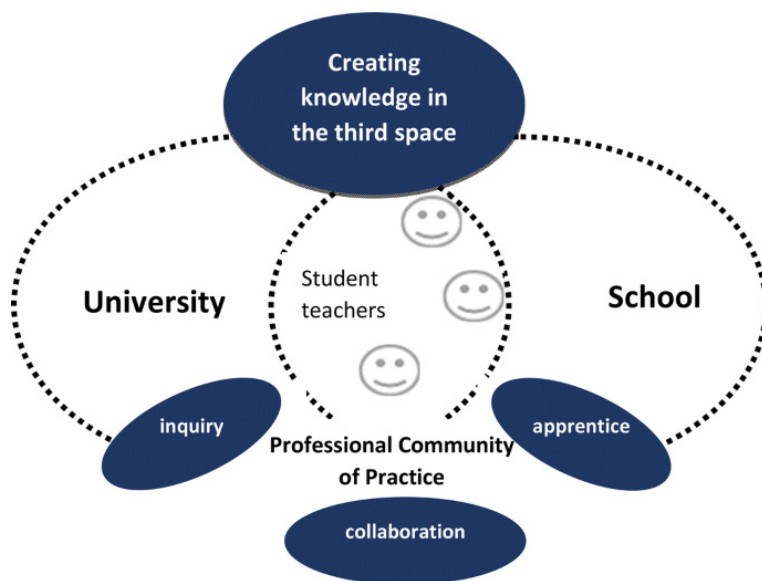

Рис. 1. **School–University partnerships** (Bernay, Stringer, Milne, et al., 2020).

According to our survey, many teachers consider partnership as a pedagogical innovation: the organization of educational dialogue between teachers and students (25%), cooperation between students, teachers, and parents (54.2%), school-community interaction, school-family cooperation – respectively 8.3%, the implementation of the principle of individualization in distance education – 4.2% (Panchenko, et al., 2022).

Thus, more than half of the respondents consider the principle of partnership as cooperative learning through the interaction of students, teachers, and parents. And this is not accidental, as the pedagogy of partnership is a truly democratic way of cooperation between teachers and students, considering differences in their life experiences, competencies, and skills, and providing unconditional equality concerning respect, trust, tolerance, and friendliness. Therefore, this approach is innovative for post-Soviet countries that used to practice totalitarianism. The model of partnership in education, for example, in Africa is public-private (Mathonsi, 2013).

In partnership, we emphasize the readiness of all subjects of the educational process (students, teachers, parents) for constructive cooperation and effective interaction in learning.

Cooperation between schools and universities is based mostly on ensuring continuity in obtaining an education and mastering relevant competencies, the professional orientation of high school students regarding the choice of a future profession, pedagogical marketing, and popularization of the image of educational institutions, etc.

During the war, pedagogical cooperation between educational institutions became especially popular. Ukrainian universities showed great solidarity in facing Russian military aggression. After all, a significant number of universities, primarily in the southern and eastern parts of the country, suffered significant destruction and/or ended up on the temporarily occupied territory. Therefore, they were forcibly relocated and hospitably received as independent institutions for full functioning in other universities of the country. An example of such solidarity is the long-term cooperation between Vasyl Stefanyk Precarpathian National University and Kherson State University, which have been working as a team in Ivano-Frankivsk since March 2022 until today. Under bomb shelling and occupation, the university continues working in Kherson. Currently, more than 600 workers are in the territory controlled by the occupiers. Many educators and students are abroad, but the higher education system continues to function. It is important that the management center of Kherson University was moved to Vasyl Stefanyk Precarpathian National University (the rector's office, the accounting department, the educational and methodological center, and administrator of the unified state database on education issues), and the logistics center also operates ensuring the salaries, scholarships, transferring students from one course to another, legalization and receiving diplomas, website and academic services of the university, etc. According to the order of the Ministry of Education and Science of Ukraine, Kherson State University will work on the basis of Vasyl Stefanyk Precarpathian National University until the end of the war.

The solidarity is manifested primarily in the fact that universities in relatively better conditions, do not try to «pull» students from those institutions that have suffered destruction or were under occupation. Rather, it is the opposite: everything contributes to the fact that they develop autonomously, retain their student contingent, accept new students, and, after the end of the war, were able to continue to function successfully within the walls of their universities.

6. The impact of the information war on the young specialist's development

There are many definitions of information warfare today. We consider the following definition "*a form of conducting an information confrontation between various subjects (states, non-governmental, economic and other structures), which involves conducting a harmful complex concerning the information sphere of a competing party and protecting one's own information sphere*" (Pashkov, 2017).

The modern scientist-theoretician of information wars M. Libiki defines 7 forms of information warfare:

- *command and control* (aimed at destroying communication channels between the command and the executors);
- *intelligence* (collection of important and protection of own information);
- *psychological* (propaganda, information processing of the population, demoralization);

- *hacking* (subversive actions and attacks against the enemy by creating special programs);
- *economic* (information blockade and information imperialism);
- *electronic* (directed against means of electronic communications: radio communications, radars, computer networks);
- *cyber war* (Kudryavtsev, 2017, p. 188).

Nowadays Russian informational aggression has become one of the tangible factors in the social and political life of Ukraine. Information terrorists have already changed their tactics several times, which means that information expansion against Ukraine has been going on for quite a long time (Suhrakov, 2020). At the same time, as experts note, the information space of the state, in which certain values are promoted, is the basis of its security (Karpenko, 2005, p. 185), because the axiological and anthropological information war conducted by Russia against Ukraine is destroying national identifications, ideals, and values.

Therefore, when we survey the experience of Ukrainian universities in wartime, it is worth focusing on important tasks related to the formation and development of information media literacy of teachers and students.

Media literacy in modern normative documents is interpreted as "a component of media culture, which refers to the ability to use information and communication technology, to express one's opinion and communicate with the help of media, to obtain the necessary information successfully, to perceive consciously and interpret information critically, obtained from various media, to separate reality from its virtual simulation, that is, to understand the reality constructed by media sources, to understand the power relations, myths and types of control that they cultivate" (Concept of Media Literacy, 2016). The concept of infomedia literacy synthesizes "information" and "media" literacy as a necessary competence of the 21st century, which involves the use of appropriate competences for working with various types of information, including the network environment.

In foreign scientific literature, infomedia literacy as an important skill includes the following components: (1) understanding the nature and functions of infomedia and critical awareness of their impact on people and society; (2) the skill of critical analysis of information transmitted with the help of media technologies; (3) the ability to search and select information effectively; (4) practical knowledge of the use of information media technologies for self-expression; (5) aesthetic evaluation; and (6) social participation by influencing the development of information media technologies (Alice, 1999).

In this context, it is extremely important to demonstrate infomedia hygiene, to interpret any information critically, to counter disinformation and fakes, to check the facts that are being spread about the war and the situation in the country, etc. Actually, universities in wartime should serve not only as centers of education and science but also as volunteering, logistic activities in the rear, information culture, etc.

7. Management of the process of introducing educational innovations into practice

In the context of the study of the outlined problem, it is important to emphasize the importance of the principal's activity in terms of increasing innovativeness and the positive image of the educational institution in wartime conditions. It is important to establish proper interaction and communication between all participants of the educational process, to define clear criteria for the form of education and evaluation of its results. After all, a significant part of students and teachers can be in different regions of the country or even abroad. However, universities must provide all conditions for providing educational services to applicants in a distance format, taking into account the war. This is a kind of innovative model of each university's educational process because the head's competence was to decide on the strategy and tactics of the work of the university, taking into account the existing social challenges.

The specificity of such interaction in a professional pedagogical environment is characterized by a certain set of management situations – a system of external conditions concerning the subject of interaction, which motivates or mediates this activity. Meeting the requirements of the management system in the field of innovation implementation creates prerequisites for its transformation or development, and going beyond the limits of the situation takes place when the subject forms and begins to implement new requirements (Budnyk, Kushniruk,

Tsybulko, et al., 2022). It is worth paying attention to the peculiarities of the management situation, which in a certain way determine the principal's behavior and is characterized by the relations of the constituent elements (Table 1).

The principal's responsibilities in the structure of managerial interaction are as follows: high internal motivation, a high level of responsibility for making and implementing professional decisions, organizing feedback, the ability to promote his/her activities and the institution, a specific style, innovative and predictive thinking, etc. At the same time, he/she must prove to be an initiative leader and agent of educational change (Halim, Senin, & Manaf, 2009).

Table 1: Parametric model of the innovative image of the educational institution

Internal parameters of the innovative image of the educational institution	The main characteristics according to the specified parameters
Relationships between team members	Humane, respectful attitude towards each member of the team
Communication and interaction	Mutual assistance, partnerships
Attitude to pedagogical activities	A creative focus on innovative activity
Dominant values	Personality development, spiritual values, self-actualization
Attitude to the goal of joint activities	Positive, team-oriented, partnership-oriented
Prevailing emotional tone (modality)	Optimistic major tone, psychological comfort
Emotional response to negative events	Experience, empathy, active search for reserves to overcome negative phenomena
General emotional and personal feelings of each member of the team	Safe feelings
External parameters of the innovative image of the educational institution	**The main characteristics according to the specified parameters**
Science and technology development	Complications of the mental activity of an individual, tension, and influence on relationships in an educational institution
Socio-economic organization	Pragmatization of attitude towards others, colleagues
The activity of management institutions in the education system	Decreasing external control
Regional features of education management departments	Decentralization of the education system, increasing the importance of the microclimate, and professional environment in each team
Interaction of self-governing institution of an educational institution with district and city organizations	Peculiarities of the influence at a specific stage of society's development

Planning an innovative development strategy for an educational institution is a kind of search for answers to the following basic questions: What are the strengths and weaknesses, opportunities, and risks facing the institution? What do you want the educational institution (university) to look like in the future? What should be

done step by step to achieve the goal and overcome possible obstacles? Perhaps the most important condition for the introduction of innovations at the university is the principal's steady focus on qualitatively new changes and renewal of his/her activities in all strategic areas (Budnyk, Kushniruk, Tsybulko, et al., 2022).

In the context of psychological-pedagogical interaction among the educational institution staff, the principal as an education manager forms a common vision of a qualitatively new level of the institution's work, predicts the phased implementation of this vision, and the evaluation of progressive changes. In case of innovation in a specific educational institution has a positive effect and shows sustainability, it should be publicly presented and proposed for use in other educational institutions.

At different stages of educational changes, M. Fullan notes, there are usually three components that influence the achievement of a result in the implementation of a new program or policy, namely: 1) use of new or revised materials such as curriculum materials or technologies; 2) new teaching approaches or strategies; 3) the alteration of beliefs or attitudes. However, success depends on the principal's management competence, because educational innovation "must be properly led and managed" (Fullan, 2007).

In managing the process of introducing educational innovations at the university level, it is important to have the criteria and skills to evaluate them in practice.

In education, we can estimate the effect of innovation via learning outcomes or exam results, teacher formative and summative, formal and informal assessments, and student self-assessment. Innovation can also be computed using such factors as productivity (more learning outcomes in a given time), time efficiency (shorter time studying the same material), or cost efficiency (less expense per student) data (Serdyukov, 2017).

In addition, we can take into account students' success, their admission to post-graduate schools for Ph.D., the level of university graduates' professional employment, their work productivity and career growth, etc. After all, the new (innovative) model of university management should ensure the coordination of the university interests, the state, business, and the sociocultural sphere in adapting the system to the processes of the formation of a new economy (Buga, 2016).

8. Conclusions

The development and support of educational innovations in Ukraine during the difficult period of the Russian military aggression is an extremely important area of activity of universities and governing bodies. The principle of innovation in the management of an educational institution is, first of all, a change of the principal's tasks, goals, content, organizational forms, methods of work, and orientation towards partnership interaction in a professional environment. Therefore, regardless of the difficult conditions of wartime, modern Ukrainian universities are oriented towards integration into the European (world) space of education and such principles as patriotism, solidarity, compliance with social challenges regarding the development of science and technology, partnership, sustainability, innovation, compliance with international and national professional quality standards for the training of highly qualified specialists.

As a result of the research, it was found that during the few months of the war with Russia, Ukrainian education has indeed undergone significant changes, primarily in the direction of the implementation of digital innovations in distance learning. The survey, which was conducted using Google Forms, made it possible to carry out a quantitative and qualitative analysis of its results. In particular, the professional experience of teachers gained during the war has been summarized. It is extremely important that teachers across the country are united on the educational front in order to continue to provide students with quality educational services Despite the forced relocation of a significant number of teachers, students, or entire educational institutions to currently safer regions of the country or abroad, the experience of organizing the educational process in the conditions of a full-scale war in the 21st century in Ukraine, which is located geographically in the center of Europe, is quite interesting. After all, the education system in this country has passed the sustainability test, which means that the future young generation will be educated on the principles of freedom, peace, patriotism, independence, and humanism (Panchenko, et al., 2022). Therefore, students are motivated to study in order to protect their country in the

long run and to acquire quality education for the development and revival of a bright future. The teacher plays a significant role in this process, focusing on the introduction of progressive innovations, national education, and the development of the creative potential of children and youth.

References

Alice Y.L. Lee. Infomedia Literacy: an educational basis for young people in the new information age. Information, Communication & Society. Vol. 2. Issue 2. 1999. P. 134-155. Publ. online: 02 Dec 2010. https://doi.org/10.1080/136911899359673

Bernay, R., Stringer, P., Milne, J. et al. (2020). Three Models of Effective School–University Partnerships. New Zealand Journal of Educational Studies, 55, 133–148. https://doi.org/10.1007/s40841-020-00171-3

Budnyk, O., Kushniruk, S., Tsybulko, L., Shevchenko, A., Fomin, K. & Konovalchuk, I. (2022). Education innovations: new wartime experience of Ukrainian universities. Journal for Educators, Teachers, and Trainers JETT, 13 (5), 464-471. https://doi.org/10.47750/jett.2022.13.05.042

Budnyk, O., Matveieva, N., Fomin, K., Nazarenko, T., & Kalabska, V. (2021). Preparation of future teachers for the introduction of digital innovation in a rural school: problems and prospects. Revista Brasileira De Educação Do Campo, 6, e13124. https://doi.org/10.20873/uft.rbec.e13124

Buga, N. (2016). Current trends in Universities under the new economy. Ekonomika i orhanizatsiia upravlinnia, 3(23), 141-147.

Karpenko, V. (2005). Information space as a factor of national security of Ukraine. Ukrainian studies. Scientific social-political cultural-artistic religious-philosophical pedagogical journal. 2005. No. 3. P. 182–192.

Kudryavtseva, N.A., Pavlichenko, O.O., Rublyova, R.I. (2017). The role of humanitarian disciplines in the formation of resistance to informational and psychological influence. Modern war: the humanitarian aspect (Materials of the scientific and practical conference of the Kherson NU, June 30, 2017). P. 187-190. URL: https://www.hups.mil.gov.ua/assets/doc/science/stud-conf/suchasna-viyna-gumanitarniy-aspekt/56.pdf

"Learning without borders": the educational process for students of 5-11 grades is organized on Ukrainian television. Website of the Ministry of Education and Science of Ukraine. 2022. https://mon.gov.ua/ua/news/navchannya-bez-mezh-na-ukrayinskomu-telebacheni-organizovano-osvitnij-proces-dlya-uchniv-5-11-klasiv International Ukrainian School. 2022. https://uis.org.ua/

Flávia Angeli Ghisi Nielsen, João Paulo Bittencourt, William A. Presada, Carolina Costa Cavalcanti, Barbara Maionchi Berardo. Pedagogical Innovation: Best Practices Through the Perspective of some Major Business Schools Around the World. UNICON Research Report, 2019. https://uniconexed.org/wp-content/uploads/2022/02/UNICON-Research-Report-2019-Pedagogical-Innovation-Best-Practices.pdf

Florence Gabriel, Rebecca Marrone, Ysabella Van Sebille, Vitomir Kovanovic & Maarten de Laat (2022). Digital education strategies around the world: practices and policies. Irish Educational Studies, 41(1), 85-106. https://doi.org/10.1080/03323315.2021.2022513

Fullan, M. (2007). The New Meaning of Educational Change. Teachers College Press, New York, NY.

Halim, R. A., Senin, A., & Manaf, A. R. (2009). Innovation in Educational Management and Leadership: High Impact Competency for Malaysian School Leaders. https://www.seameo.org/vl/library../dlwelcome/projects/jasper/jasper09/FullPaper.pdf

Concept of implementation of media literacy in Ukraine: new edition, 2016.URL: https://ms.detector.media/mediaosvita/post/16501/2016-04-27-kontseptsiya-vprovadzhennya-mediaosviti-v-ukraini-nova-redaktsiya/

Nowak, M. (2015). Rozwój i jego wychowawcza wartość w pedagogice rozwoju według Jana Pawła II [Development and Its Educational Value in the Pedagogyof the Development According to John Paul II]. Labor et Educatio, 3, 31-50.

One hundred days of war: challenges of Ukrainian education. Osvitoriia Media. 2022. https://osvitoria.media/experience/sto-dniv-vijny-vyklyky-ukrayinskoyi-osvity/

Panchenko, O., Shynkarova, V., Maistryk, T., Budnyk, O., Nikolaesku, I., Matsuk, L., & Fomin, K. (2022). Pedagogical innovations in Ukrainian educational institutions: social challenges and realities of war. Revista Brasileira De Educação Do Campo, 7, e14557 https://doi.org/10.20873/uft.rbec.e14557

Pashkov, M. (2017). Russian information expansion: the Ukrainian bridgehead. URL: http://razumkov.org.ua/uploads/article/2017_Information Warfare_ukr.pdf

Reinsfield, E. (2020). A future-focused approach to the technology education curriculum: the disparity between intent and practice. International Journal of Technology and Design Education, 30, 149–161. https://doi.org/10.1007/s10798-019-09497-6

Rembierz, M. (2021a). Bezgraniczność głupoty i granice mądrości. Na rozdrożach sokratejskiej pedagogii niewiedzy. Ethos, 34, 1(133), 243-273. https://doi.org/10.12887/34-2021-1-133-15

Rembierz, M. (2021b). Stan pandemii jako ćwiczenie duchowe. O uczeniu się i oswajaniu siebie w stanie pandemicznej zapaści i dezorientacji witalnej, w: Gumuła Wiesław (red.): Dzienniki stanu pandemii, Kraków, Zakład Wydawniczy Nomos. S. 223-245. ISBN 978-83-7688-586-5.

Rembierz, M. (2021c). Revaluations of the times of pandemics: on the interference of the pandemic in the world of human values. Transformacje, 3, 132-146.

Rosen, L. D. (2010). Rewired: Understanding the iGeneration and the Way They Learn. New York: Palgrave Macmillan.

Sirotnik, K. A., & Goodlad, J. I. (Eds.). (1988). School-university partnerships in action: Concepts, cases, and concerns. New York, NY: Teachers College Press.

Serdyukov, P. (2017). Innovation in education: what works, what doesn't, and what to do about it? Journal of Research in Innovative Teaching & Learning, 10 (1), 4-33. https://doi.org/10.1108/JRIT-10-2016-0007

Suhrakov, A. S. (2020). Modern challenges of the Russian-Ukrainian information war. Scientific journal of the National Pedagogical University named after M. P. Drahomanov. Series 22: Political sciences and methods of teaching socio-political disciplines: [Coll. of science works]. Kyiv: Publishing House of M. P. Drahomanov National University of Applied Sciences, 27, 83-88.

The New Ukrainian School: conceptual principles of secondary school reform. 2016. https://mon.gov.ua/storage/app/media/zagalna%20serednya/Book-ENG.pdf

Vasianovych H. P. (2014). Spiritual culture and anti-culture: possibilities of ICT in the education of student youth. Modern information technologies and innovative teaching methods in the training of specialists: methodology, theory, experience, problems. Vol. 37. P. 76-80.

Contakt:

Олена БУДНИК
доктор педагогічних наук, професор,
директор Центру інноваційних освітніх технологій «PNU EcoSystem»
Прикарпатського національного університету імені Василя Стефаника
ORCID ID: 0000-0002-5764-6748
olena.budnyk@pnu.edu.ua
+38066 0724940