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The development of environmental culture of future teachers and preschool teachers under martial law

ABSTRACT: The article explores the development of environmental culture of future teachers and preschool teachers under martial law. The interpretation and structure of environmental culture as a complex (integral) formation, consisting of environmental knowledge and skills, environmental awareness, environmental thinking, environmental behavior, beliefs and personal qualities, environmental activities, multidimensional integral component of intellectual and spiritual culture of an individual, have been highlighted.

The directions of the development of the environmental culture of future teachers and preschool teachers, which are pivotal in the context of modern social challenges, such as: studying the environmental consequences of war and ways to eliminate them; using ecoterapy to prevent and overcome the harmful impact of war on the psycho-emotional state of children and adults, have been identified.

Innovations in the content, forms, methods, and means of developing students' environmental culture have been found out. In the context of environmental education, the attention has been focused on the potential of Ukraine War Environmental Consequences Journal, collaborative classes of students from Ukraine and Poland using distance learning platforms, organization of scientific research by students from different countries, study of forest preschool education, and creating fairy tales on environmental topics.

KEY WORDS: environmental culture, environmental education, sustainable development, environmental consequences of war, ecoterapy.

Humanity has long been concerned with environmental problems. The origins of environmental education can be found in the ancient civilizations of the West and the East. Its elements were a part of the overall picture of the world and are reflected in the works of the founders of philosophy: Confucius, Lao Tzu, Democritus, Aristotle.

Over time, environmental problems have diversified and become more significant. One contributing factor is the deteriorating human attitude towards the environment, marked by an increasingly predatory consumption of natural resources. The human-nature conflict was deepening, threatening the existence of humanity.

Since the end of the twentieth century, environmental threats have significantly increased. The pace of environmental destruction and pollution has gained tremendous momentum. The term “civilization of death” has emerged to accurately reflect the danger that humanity faces as a result of uncontrolled use of natural resources.

The already dire situation caused by environmental pollution and ecosystem changes was exacerbated by the war that Russia started against Ukraine in 2014. In February 2022, a large-scale invasion of Ukrainian territory began, accompanied by even more catastrophic environmental consequences.

Soil, water and air pollution, the extinction of rare plant and animal species, and the destruction of protected areas are the challenges Ukraine is facing, in addition to the most significant one – human losses, the deaths of children.

Environmental problems recognize no borders; they have transcended Ukraine, spreading globally, and now are solved jointly by the states.

In addition to efforts to regulate the environmental situation, work is being done to prevent new environmental threats. As it was several decades ago, the education of children and young people to value nature is regarded as a key factor in preserving the environment. In 2002, at the World Summit on Sustainable Development, it was education that was identified as the most important factor in solving the problems of balanced use of natural resources (Zaluzhna, Trofimchuk, 2022).

The development of the environmental culture of senior preschoolers, schoolchildren and students is one of the main tasks of educational institutions at the present stage. First and foremost, it is they who must save the planet Earth from disaster as a result of people’s barbaric attitude to natural resources, ignoring the laws of nature in favor of commercial interests and conquest ambitions.

Teachers and preschool teachers are the leading agents of educational processes, and, therefore, the most important task is to develop environmental culture in future teachers and prepare them for its formation in schoolchildren and preschoolers.

The problem of developing environmental culture of children and youth has been the subject of numerous studies by scholars such as Józef Marcełi Dołęga, Michał Latawiec, Krystyna Najder-Stefaniak, Andrzej Papuziński,

Andrii Radei, Nataliia Trofimchuk, Halyna Varkholyk, Alla Zaluzhna, and others. They have concluded that it is necessary to establish a connection between environmental culture and general (worldview) culture of an individual; philosophical, psychological, and pedagogical understanding of environmental and economic problems. Scientists unanimously agree that human attitudes towards nature must change. That is why new sciences related to nature preservation, including sozology, are emerging.

Scientists study the issues of environmental culture in connection with sustainable development and other areas of education. Iryna Kuzma, Iryna Levchyk, Hanna Chaikovska, and others have developed a methodology for the formation of sustainable development competencies in primary school students, pointing out the need to integrate education for sustainable development with media education (Chaikovska, Yankovych, Levchyk, Kuzma, Rozhko-Pavlyshyn, 2021). The level of formation of these competences in future primary school teachers will increase if these competences are developed in English classes using facilitation methods (Chaikovska, Levchyk, Adamska, Yankovych, 2023).

At the same time, there is a need to investigate the issues concerning the impact of modern social challenges on the development of environmental culture of students-teachers and preschool teachers. This includes studying its features, forms, and methods, particularly in the context of martial law, and clarification of the definition of “environmental culture”.

Environmental culture, definition and structure

The concepts of “culture” and “environmental culture” are interpreted in a multivariate way. According to N. Trofimchuk, “today there are more than 500 definitions of the concept of culture, which is explained by its multifaceted nature and specificity of study by different areas of scientific knowledge” (Trofimchuk, 2023, p. 37).

The diversity of approaches to interpreting the concept of “culture” is one of the reasons for the lack of consensus in defining the concept of “environmental culture”. This is exactly what N. Trofimchuk believes: “It is worth noting that in the modern educational discourse, there is no generally accepted interpretation of the concept of ‘environmental culture’, which is mainly due to the absence of a single definition in the understanding of culture as a whole” (Trofimchuk, 2023, p. 39).

H. Trofimchuk has analyzed the approaches to the interpretation of this term in the works of scientists. Based on the results of their research, she

has identified the semantic determinants of the concept of “environmental culture”. Among the most popular are the following: “an integral formation of an individual based on environmental knowledge and skills, environmental awareness and environmental style of thinking”, “a multidimensional holistic component of the intellectual and spiritual culture of an individual, which ensures creative self-realization in understanding and solving environmental problems” (Trofimchuk, 2023, p. 46–47).

The conclusion of A. Zaluzhna and N. Trofimchuk regarding the unity of environmental knowledge, culture, and environmental activities, personal responsibility for the state of the natural environment, is noteworthy (Zaluzhna, Trofimchuk, 2022).

H. Varkholyk is also a supporter of the idea of the complexity of the phenomenon of environmental culture: “Environmental culture is a system of organically interconnected elements of human nature-transforming activities and its theoretical and moral assessment, which necessarily takes into account socio-ecological principles and requirements” (Varkholyk, 2014, p. 325). This interpretation highlights the connection between environmental protection activities and morality.

A. Radei, having substantiated the theoretical and methodological aspect of environmental culture, believes that it is “as the organic, integral part of culture, represents a special sphere of human activities, characterizing the originality of interaction of people with nature and a system of dialectically interrelated elements, including environmental relations, environmental activities, and environmental awareness” (Radei, 2008, p. 76).

The research of M. Latawiec is noteworthy, as he considers human attitude to nature from a Christian perspective, focusing on the person’s responsibility for his or her actions. The author describes the emergence of new sciences of nature protection, in particular, sozology (Latawiec, 2015).

Analyzing the scientists’ interpretation of the term “environmental culture”, M. Latawiec notes that it should integrate both the features inherent in culture and natural specificity.

M. Latawiec found out that environmental culture is a reflection of education that forms a person’s attitude to the world. In his opinion, the purpose of environmental education, grounded in Christian principles, is to consider nature protection on the way to salvation. The truth is that if a person moves away from God’s plans for the world He created, he or she often forgets about his or her fellow beings and loses respect to nature (Latawiec, 2015).

Thus, scientists are looking for the ways to restore harmony between people and nature. To ensure that environmental culture prevails in society in

the full sense of the word, J. M. Dołęga believes that many significant changes must take place in the key elements of culture, including science, engineering, technologies, art, and religion. These changes have already started and will continue to occur in the future in these elements of culture (Dołęga, 2000).

The approach to environmental culture as an integral personal formation encourages the definition of its structure.

H. Trofimchuk has identified the following components in the structure of environmental culture of students of economic and humanitarian colleges by implementing an integrative approach: cognitive, axiological, humanistic, and active. The cognitive component expresses a person's ability to think strategically. The axiological component is pivotal for the development of environmental consciousness, which includes norms and values as achievements not only of an individual but also of social groups. "The humanistic component makes it possible to explicate environmental culture as more advanced and perfect form of humanism development in general. This involves transformational changes of a person from 'homo sapiens' to a new type of 'homo ecologus'. The active component of students' environmental culture contributes to the integration of cognitive, practical, and creative skills that include environmental beliefs, environmental knowledge, as well as preparedness for ecologically sound environmental development and protective activities" (Trofimchuk, 2023, p. 201).

Therefore, it can be stated that environmental culture includes environmental awareness, norms, and values, environmental beliefs, environmental knowledge, and environmental protection activities.

The structure of environmental culture has been identified in the pedagogical works of H. Varkholyk. The scientist notes: "The content of the term 'environmental culture' is predominantly revealed through a set of its pivotal components: environmental literacy, a system of ideas about the laws and mechanisms of economic functioning; the ability to work with environmental information; environmental awareness; proficiency in environmental language, environmental thinking, adherence to the 'rules' of environmental behavior; character traits that ensure competent environmental actions, etc." (Varkholyk, 2014, p. 325).

H. Varkholyk has not only identified the structural elements of environmental culture (environmental knowledge and skills, environmental awareness, environmental thinking, environmental behavior, beliefs and personal qualities, environmental activities), but has also shown their interconnection: "The foundation of environmental culture is made up of environmental knowledge, but, in turn, it is the basic element of environmental views. Without knowledge and skills, it is impossible to form an adequate

attitude to activities and moral guidelines, and then, with a positive attitude, the knowledge and skills become a prerequisite for productive activities. At the same time, it is possible to identify feedback” (Varkholyk, 2014, p. 326).

The structure of environmental culture is a key factor in determining the ways of its development in future teachers and preschool teachers, including during martial law.

Innovations in the development of environmental culture in future teachers and preschool teachers in the conditions of new social challenges

The development of environmental culture of education seekers – children and students – is a complicated process, and not only due to the problems of environmental management, but also because of the need to form knowledge, beliefs, values, skills, etc. in the general culture context, in the interconnection of all aspects of education.

M. Latawiec identifies that the phenomenon under study is created at three levels: cognitive (transfer of reliable natural knowledge, justification of eco-ethical values and their imperatives); emotional and volitional (cultivation of moral and aesthetic sensitivity to the natural world, its beauty) and behavioral (active opposition to processes that harm the environment) (Latawiec, 2015).

Environmental culture is formed in the context of the Sustainable Development Goals.

The sixteenth goal (SDG 16) is Peace, justice and strong institutions.

The Sustainable Development Goals are interconnected. If one of them is not implemented, it affects the others, which also become unattainable. This is especially true in Ukraine during martial law.

As the war is ongoing and there is no peace, it is impossible to achieve these goals: Clean water and sanitation (SDG 6), Life below water (SDG 14), Life on land (SDG 15), etc.

Military operations are a significant factor in making corrections to the content, ways and means of developing environmental culture, in particular for future teachers and preschool teachers.

In the current social challenges, two areas of development of students' environmental culture dominate: studying the environmental consequences of war and ways to eliminate them; using the means of nature (ecotherapy or nature therapy) to prevent and overcome the harmful effects of war on the psycho-emotional state of children and adults. Consequently, future teachers and preschool teachers need to acquire the skills to heal nature and, at the

same time, use the means of nature to provide care for those who have experienced the consequences of war and other social problems.

New media have begun to emerge in Ukraine to respond quickly to new environmental threats and to unite the efforts of specialists from different fields to overcome the environmental disaster. In this context, the Ukraine War Environmental Consequences (UWEC) Journal, which was introduced in July 2022, is valuable. Its materials are a much-needed source for making changes to the curricula of pedagogical education institutions.

The publishers, the Ukraine War Environmental Consequences Work Group, a community of environmental activists, experts, and journalists, in the first issue of the journal set one of their goals to talk about the environmental consequences of the war in Ukraine in a way that would be heard in the farthest corners of the planet, noting in particular: “Today, the repercussions of Russia’s invasion of Ukraine are beginning to be felt around the world. Global challenges include an energy crisis; ... regression environmental and social policies in many countries, and slowing progress towards achieving climate neutrality goals” (2022, Issue1). The journal’s founders emphasize: “The world cannot wait for the war to end. We must search for solutions to the questions of our time, be they climate change, destruction of natural ecosystems, or the resumption of the Cold War” (2022, Issue1).

The journal highlights the problems not only of the territories where hostilities have been taking place since 2022, but also since the beginning of the war, i.e. since 2014. In particular, the authors raise the alarm that during the nine years of occupation, the territory of Crimea with its unique biodiversity was actively used for military exercises, and since February 2022, it has become one of the springboards for military invasion. All of this has had an extremely negative impact on the environment of the peninsula and has been described by experts.

The UWEC Work Group is currently working on a study of the consequences of the Crimea’s military occupation. Thanks to the collected data, it can already be said that unique natural areas have suffered significant damage. The steppes were actually destroyed as a result of military exercises, and environmental protection activities in some regions have been suspended (Kolodezhna, 2023).

In order to improve the content of environmental education, it is important to have information about the fate of Ukrainian territories damaged by explosions (Planning for Environmental Restoration). Oleksii Vasyliuk and Valeriia Kolodezhna emphasize that “a partial chemical reaction occurs as the result of a munitions explosion of any caliber and results in pollution of soil

and atmosphere” (Vasyliuk, Kolodezhna, 2022, p. 4). The authors also describe other types of soil damage and ways to solve this problem.

Future teachers use information about flora and fauna that may disappear due to military operations. Analyzing the problem of rare flora destruction, O. Vasyliuk notes: “Biologists have compiled a list of 20 plant species at risk of extinction due to Russia’s invasion of Ukraine. All of these species are extremely rare and currently grow only in areas affected by the fighting” (Vasyliuk, 2022, p. 12).

Also, there is a report about environmental consequences of Russian war in Ukraine (Angurets, etc., 2022).

However, not only the content and means of environmental education and the study of the environmental consequences of war are being improved, but also the forms and methods, including ecotherapy, reading, and analyzing fairy tales on environmental protection, and creating fairy tales.

Ecotherapy or nature therapy is an important area and form of developing the students’ environmental culture, taking into consideration the health problems of children and youth during the war.

A study conducted in February 2023, involving 202 primary school students from Ternopil, Lviv, and Chernivtsi regions, revealed that children, even in areas without active hostilities, felt the impact of the war: 39.6 per cent (80 respondents out of 202) of children felt anxiety, 39.1 per cent (79 respondents out of 202) felt fear (Yankovych, 2022 b). The students were concerned about the fate of Ukraine.

Obviously, these negative emotions (anxiety, fear) are the cause of illness. Specifically, 40 (19.8 %) of schoolchildren who participated in the survey believed that they fell ill more frequently (Yankovych, 2022 b).

To prevent negative emotional states, it is important to use methods that have both pedagogical and therapeutic effects.

The natural environment (water, air, sun, cold, smells, forest noise, etc.) has long been used by different peoples for healing and disease prevention. Iryna Malyshevska considers the terms ecotherapy and nature therapy to be synonymous (Malyshevska, 2013). She distinguishes the following types of this therapy: aromatherapy, herbal therapy, zootherapy, phytotherapy, and algotherapy. Research conducted by the scientist revealed that 90% of people who walked for thirty minutes in the park experienced increased self-esteem, while 71% reported decreased feelings of tension and depression (Malyshevska, 2013).

Nature therapy positively affects the students’ environmental development, causing a responsible personal and value-based attitude to the environment (Malyshevska, 2013).

An important place in the development of environmental culture is given to fairy tale therapy, reading, analyzing, and creating fairy tales.

Environmental fairy tales are popular among children around the world. In Ukraine, children are fond of reading not only folk tales, but also author's tales, for example, by V. Sukhomlynskyi (Sukhomlynskyi, 2022). Therefore, future teachers and preschool teachers practice using fairy tales in the formation of children's environmental culture. During the war, fairy tale therapy is more often implemented. The difference is that the student becomes a participant in the fairy tale story, being able to influence the events. Connections are formed between the fairy tale events and real-life behavior. This is the process of transferring elements of fairy tales into everyday actions. During the development of environmental culture by means of fairy tale therapy, a person gains awareness of his or her uniqueness, feels harmony with himself or herself and the world.

Fairy tale therapy includes creating your own fairy tale, changing events in a well-known fairy tale, etc. It is an important form of developing future teachers' environmental culture and preparing them to use it in their work with children. Fairy tale therapy helps to acquire knowledge, improve health, develop children's creative skills, etc.

Collaborative online classes involving students from various countries, including Ukraine and Poland, while studying related disciplines, are also noteworthy as a form of educational engagement.

Ternopil Volodymyr Hnatiuk National Pedagogical University and the Kujawy and Pomorze University in Bydgoszcz have experience in organizing such classes. In May 2023, these classes were conducted within disciplines such as "Actual Problems of Preschool Education", "Modern Concepts in the Didactics of Preschool and Primary Education", and "Pedagogical Technologies in Primary School". Students – future specialists in preschool and primary education – from both universities participated in these classes, analyzing concepts, forms, and methods of environmental education.

The students from Ternopil presented their projects in English, and the Polish students – in Polish. These collaborative classes provide an opportunity for students to discuss environmental and educational issues in their respective countries, as well as the new social challenges of the twenty-first century. Additionally, this approach improves students' foreign language competence and motivates them for self-development in their professional field, which is an advantage of this new form of education.

It is noteworthy that the cooperation agreement between Ternopil Volodymyr Hnatiuk National Pedagogical University and Kujawy and Pomorze

University (Bydgoszcz, Poland) was initially signed in 2014. However, this collaboration has recently gained new momentum and has been enriched with interesting initiatives.

There is also a positive trend in the training of future teachers to study the work of institutions and clubs that provide environmental education for children in the face of modern challenges and use the means of nature to enhance health and cognitive functions. Even during the war, the Boom-Boo-Roo-Room children's club, which follows the model of European forest kindergartens, continues to work in Lviv. The club promotes the development of effective communication skills, teamwork, the ability to assess risks and one's own capabilities, the ability to plan; learning about the surrounding world and the mysteries of nature, and understanding the principles of an environmentally conscious lifestyle.

The program of the Lviv forest kindergarten (club) includes excursions, meetings with interesting people, for example, with a herpetologist accompanied by a skid, water games, the organization of a travelling shop to raise funds for the needs of the army, and many more original activities (Yankovych, 2022 a). Future preschool teachers and teachers study the work of the Boom-Boo-Roo-Room children's club in the context of implementing promising ideas.

The environmental problems that have arisen during the war are becoming one of the areas of student research. At the same time, there is a growing interest in the scientific studies of foreign scientists on environmental protection and the restoration of natural landscapes.

Conclusions

The development of personal environmental culture is a longstanding issue that has gained heightened relevance in the late twentieth and early twenty-first centuries due to humanity's predatory attitude towards nature, posing a threat to civilization's existence. The environmental situation has become even more concerning after Russia's large-scale invasion of Ukraine. Education of children and youth, led by teachers and preschool teachers, is considered one of the most important ways for improving the relationship between people and nature.

Environmental culture is interpreted by scientists in a multivariate way. However, they agree that it is a complex (integral) formation, in the structure of which environmental knowledge and skills, environmental awareness, environmental thinking, environmental behavior, beliefs and personal qualities,

environmental activities, a multidimensional integral component of the intellectual and spiritual culture of an individual are distinguished.

During the war, the content, forms, and methods of education of future teachers and preschool teachers are changing. Two pivotal directions have emerged for the development of the environmental culture of these professionals in the conditions of modern social challenges: studying the environmental consequences of war and ways to eliminate them; using the means of nature (ecotherapy) to prevent and overcome the harmful impact of war on the psycho-emotional state of children and adults.

New media materials are used to make changes to the curriculum. The Ukraine War Environmental Consequences Journal, which was introduced in July 2022, and “Environmental consequences of Russian war in Ukraine” report are valuable.

Effective forms of education include reading and analyzing fairy tales on environmental topics, creating fairy tales, fairy tale therapy; studying the activities of forest kindergartens and clubs; and conducting classes for students from two or more countries using distance learning platforms that cover topics related to sustainable development and environmental conservation.

The idea of organizing collaborative scientific research involving students from Ukraine, Poland, and other countries on the development of environmental culture among children and youth, as well as environmental preservation, is promising.

Bibliography

- Angurets O., Khazan P., Kolesnikova K., Kushch M., Černochova M., Havránek M. (2022). *Environmental consequences of Russian war in Ukraine*. <https://cleanair.org.ua/wp-content/uploads/2023/03/cleanair.org.ua-environmental-consequences-of-russian-war-in-ukraine-war-damages-en-version.pdf> (accessed: 30.01.2024).
- Chaikovska H., Levchyk I., Adamska Z., Yankovych O. (2023). Formation of sustainable development competencies in Ukrainian English for specific purposes students. *International Journal of Sustainability in Higher Education*. November. <https://www.emerald.com/insight/content/doi/10.1108/IJSHE-07-2023-0306/full/html> (accessed: 30.01.2024).
- Chaikovska H., Yankovych O., Levchyk I., Kuzma I., Rozhko-Pavlyshyn T. (2021). Formation of sustainable development competencies in primary school children. *Journal of Education Culture and Society*, 2, 341–360. https://www.researchgate.net/publication/354848434_Formation_of_sustainable_development_competencies_in_primary_school_children (accessed: 30.01.2024).
- Dołęga J. M. (2000). Philosophy of environmental sciences and ecological culture. *Studia Philosophiae Christianae*, 36/2, 67–79. https://bazhum.muzhp.pl/media/files/Studia_Philosophiae_Christianae/Studia_Philosophiae_Christianae-r2000-t36-n2/Studia_Philosophiae_Christianae-r2000-t36-n2-s67-79/Studia_Philosophiae_Christianae-r2000-t36-n2-s67-79.pdf (accessed: 30.01.2024).

- Kolodezhna V. (ed.) (2023). Militarization of Crimea. An infographic. *Ukraine War Environmental Consequences Journal*, 8, 21. <https://uwecworkgroup.info/militarization-of-crimea/> (accessed: 30.01.2024).
- Latawiec M. (2015). Through responsibility to environmental culture. *Fides et Ratio Scientific Quarterly*, 21 (1), 185–195.
- Malyshevska I. A. (2013). *Methods of using nature therapy as a technology for correcting the primary school students' health: a monograph*. Uman: Vizavi Publishing and Printing Centre. <https://dspace.udpu.edu.ua/bitstream/6789/1645/1/Mono.pdf> (accessed: 30.01.2024).
- Najder-Stefaniak K. (2005). Civilization ecological instead of civilization immediate. *Studia Ecologiae et Bioethicae*, 3, 203–211. [https://bazhum.muzhp.pl/media/files/Studia_Ecologiae_et_Bioethicae-r2005-t3/Studia_Ecologiae_et_Bioethicae-r2005-t3-s203-211/Studia_Ecologiae_et_Bioethicae-r2005-t3-s203-211.pdf](https://bazhum.muzhp.pl/media/files/Studia_Ecologiae_et_Bioethicae/Studia_Ecologiae_et_Bioethicae-r2005-t3/Studia_Ecologiae_et_Bioethicae-r2005-t3-s203-211/Studia_Ecologiae_et_Bioethicae-r2005-t3-s203-211.pdf) (accessed: 30.01.2024)
- Papuziński A. (1999). *Introduction to the philosophical problems of ecology*. Bydgoszcz.
- Planning for environmental restoration. Analytical report. http://epl.org.ua/wp-content/uploads/2022/06/FIN_Planuvannya-vidnovlennya-dovkilliya.pdf (accessed: 30.01.2024).
- Radei A. S. (2008). Environmental consciousness and culture: theoretical and methodological aspect. *Bulletin of National Technical University of Ukraine "Kyiv Polytechnic Institute". Philosophy. Psychology. Pedagogy*, 3 (24), 74–78.
- Sukhomlynskyi V. (2022). *The best fairy tales and stories*. Kharkiv.
- Trofimchuk N. V. (2023). Formation of environmental culture of students of economic and humanitarian colleges by means of implementing an integrative approach: Dissertation for the degree of Candidate of Pedagogical Sciences in speciality 13.00.04 – Theory and Methods of Professional Education. Rivne, Khmelnytskyi.
- Ukraine War Environmental Consequences Journal. 2022. 1 (July). <https://uwecworkgroup.info/issue-1/> (accessed: 30.01.2024).
- Varkholyk H. V. (2014). Education of student youth in the context of environmental culture. *International scientific bulletin*, 2 (9), 324–331. <https://dspace.uzhnu.edu.ua/jspui/bitstream/lib/9834/1/35.pdf> (accessed: 30.01.2024)
- Vasyliuk O. (2022). 20 plants that could disappear because of Russia's invasion of Ukraine. *Ukraine War Environmental Consequences Journal*, 2, 12–15. <https://uwecworkgroup.info/20-plants-that-could-disappear-because-of-russias-invasion-of-ukraine/> (accessed: 30.01.2024).
- Vasyliuk O., Kolodezhna V. (2022). Future of munitions-damaged Ukrainian lands. *Ukraine War Environmental Consequences Journal*, 2, 3–11. <https://uwecworkgroup.info/future-of-munitions-damaged-ukrainian-lands/> (accessed: 30.01.2024).
- Yankovych O. I. (2022). Genesis of forest preschool education in Poland and Ukraine: origins and modernity. In: O. Turko, O. Yankovych (Eds.) *Word. Strategies. Innovations: a collective monograph* (pp. 123–149). Ternopil: Vector. http://dspace.tnpu.edu.ua/bitstream/123456789/27264/1/4_Jankovuch.pdf (accessed: 30.01.2024).
- Yankovych O. (2022). Safety culture and education of primary school students in Ukraine under martial law. *Pedagogika społeczna*, 3 (85), 161–175. <http://pedagogikaspoleczna.com/wp-content/uploads/2023/08/PS-3-2022-161-175.pdf> (accessed: 30.01.2024).
- Zaluzhna A. E., Trofimchuk N. V. (2022). Environmental culture of the individual as relevant philosophical and pedagogical problem. *Pedagogical Sciences: Theory, History, Innovative Technologies: a collection of scientific works of Sumy A.S. Makarenko State Pedagogical University*, 6 (120), 251–260. <https://pedscience.sspu.edu.ua/wp-content/uploads/2023/02/%D0%B7%D0%B0%D0%BB%D1%83%D0%B6%D0%BD%D0%B0.pdf> (accessed: 30.01.2024)