

UDC 378:004:37.02

DOI: 10.52534/msu-pp.8(2).2022.45-52

**Oksana A. Kovalenko\***Bohdan Khmelnytsky National University of Cherkasy  
18031, 81 Shevchenko Blvd., Cherkasy, Ukraine

## Development of a Culture of Information and Communication with Children among Future Educators

**Article's History:**

Received: 18.06.2022

Revised: 25.09.2022

Accepted: 27.10.2022

**Suggested Citation:**

Kovalenko, O.A. (2022). Development of a culture of information and communication with children among future educators. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology"*, 8(3), 45-52.

**Abstract.** The relevance of the problem of using information and communication technologies in the educational process of higher education institutions as an effective means of learning in modern conditions is dictated by life itself. The system of passive transfer of knowledge from teachers to students in the past, and therefore, future specialists have to master quite a significant amount of educational material independently. To do this, they must use various sources of information to select reliable and up-to-date material. To develop the professional competencies of a future teacher, in particular, an educator, it is not enough just to get acquainted with the information. Students need to form a culture of working with information, which covers the development of skills and abilities for independent selection of information, its processing, successful application and transmission in various ways. It is these acquired skills that will be useful for future educators when they need to ensure the educational process in a preschool institution and convey the necessary information to preschool children. The purpose of the study is to reveal different views and approaches to the use of information and communication technologies in the professional training of future educators, in particular, for the development of their skills in working with various information and culture of communicating it to preschool children. The paper is based on the analysis of scientific and methodological studies related to the use of information and communication technologies, which are implemented at different stages and for different purposes during the professional training of future teachers in higher education institutions. The paper also provides an example of specially developed tasks that contribute to the development of information culture in students – future educators and the establishment of their culture of information delivery to ensure the development of preschool children, in particular, logical and mathematical. The material of the study can be useful for researchers who deal with the introduction of information and communication technologies in higher education and the development of information culture in future teachers; teachers of the speciality "Preschool education"; preschool teachers in the process of self-education and professional duties

**Keywords:** information and communication technologies, professional training, teacher of preschool education institutions, work with information, ability to share information, logical and mathematical development, preschoolers

\*Corresponding author

### INTRODUCTION

The success of Ukraine's entry into the European socio-cultural space and its achievement of the level of developed countries directly depend on the education of citizens. How fast and efficient this journey will be depends on those who are now entering the teaching profession, as

it is they who will educate and train the new generation of Ukrainians. They will need to resolve the contradictions between local and global, general and individual, spiritual and material, traditional and modern approaches and views on certain issues. Therefore, the professional training of future

teachers, including educators, should meet the current challenges of children's education and project it for the future.

According to the state standards of higher education, in particular, the training of preschool specialists [1] and the laws of Ukraine "On Higher Education" [2] and "On Preschool Education" [3], the Basic Component of Preschool Education [4], the Concept of a New Ukrainian School [5], instructional and methodological recommendations for ensuring the continuity of preschool and primary education [6], etc., the future teacher as a result of obtaining professional education should develop general and professional competencies, should love children, be able to solve various professional and pedagogical tasks in the conditions of a modern preschool education institution, be socially adapted, be able to think outside the box, critically and logically, be able to use modern information and communication technologies (ICTs), be proactive in establishing professional position, etc.

Maintaining a balance between academic knowledge and practical skills in the professional training of future specialists requires an updated approach to the activities of teachers and students. If earlier the cooperation of teachers with students was focused in a regular audience, at the present stage, such cooperation takes place in a mixed, and more often in a remote format, which would be impossible without the use of ICTs. Relatively passive assimilation of knowledge by students, which until recently prevailed, is replaced by their active research and exploration activities, which are provided by ICT tools. The peculiarities of such activities are the development of students' skills in the independent selection of information, its processing, application, and transmission in various ways. It is these skills that will become the basis for performing professional duties by future educators.

It is also possible to identify a number of other reasons that prompted the need to use ICTs in the educational process, in particular in higher education, among them: an increase in the volume of educational information that students need to independently find and process; the obsolescence of certain conventional means and methods of teaching; prompt feedback for interaction between participants in the educational process; the development of electronic systems for monitoring and evaluating students' knowledge; the influence of external factors on the ways and forms of ensuring the educational process; updating the requirements for candidates for the position of teacher; high competition in the modern labour market; the emergence of disagreements between the need and opportunities for providing educational services, in particular, those provided to preschool children, etc.

Therefore, the use of ICTs creates an opportunity to adapt the cooperation of all participants in the educational process to certain living and learning conditions, optimise the educational process and, if necessary, ensure the academic mobility of its participants.

*The purpose of the study* is to reveal theoretical and practical views and approaches to the use of ICTs in the professional training of future educators for the development of

their skills in working with various information and culture of communicating it to preschool children, in particular, information that contributes to the logical and mathematical development of children.

## LITERATURE REVIEW

The theoretical basis of the paper is based on a number of scientific studies devoted to the chosen topic and related issues, which reveal the vision of using ICTs in the professional training of future educators, in the development of their culture of working with information and the culture of communicating information to preschool children, including in the process of their logical and mathematical development. The analysis of research papers showed that most of them cover the theoretical aspect of the use of ICTs in the professional training of future teachers, and only a few relate to the development of information culture and the culture of communicating information to preschool children.

The influence of various conditions on the professional training of higher education applicants, including future educators, was investigated by L. Artemova [7], A. Belenka [8], S. Semchuk [9], I. Tymofeieva [10] and others. The use of ICTs as one of the important conditions for modernising the educational process at its various stages and pedagogical support for educational applicants was studied by K. Wittenberg [11], Yu. Zaporozhtseva [12], O. Kravchyshyna [13], I. Nikolayesku [14], I. Taran [15] and others. The development of the future teacher's readiness for various types of activities in the presence of certain conditions was considered by V. Kurok [16], I. Mardarova and O. Lystopad [17], O. Mkrtychian [18] and others. The issues of using ICTs by future educators to ensure the logical and mathematical development of preschool children were investigated by K. Hnezdilova [19], L. Ishchenko [20], S. Chupahina [21], O. Brezhnieva and K. Shcherbakova [22] and others. The development of information culture of students, including future educators, was investigated by A. Klieba [23], I. Chayka [24] et al.

The author of this study suggests that the issue of using ICTs for the development of a culture of communicating information to preschool children in future educators is rather neglected, but the outlined problems are important for the professional development of future teachers.

Yu. Zaporozhtseva [12] points to the fact that the use of information and communication technologies in the educational process contributes to increasing learning productivity due to "accessibility to new information, the possibility of the operational interconnection of the source of educational information and participants in the educational process, an effective combination of individual, pair, and group learning technologies, verbal and nonverbal behaviour models." These advantages of using ICT are associated, as the researcher notes, with the cognitive activity of educational applicants, which is provided by emotionality, visibility, individualisation, and differentiation of learning.

The readiness of future educators to use information and communication technologies in solving pedagogical

situations is referred by O. Kravchishina [13] to the important qualities of future specialists and their success as professionals. The researcher notes that ICTs are turning into professional tools for communication and providing educational services, not bypassing preschool education. Until recently ICT tools were considered an interesting modern innovation in the educational process, and today, in particular, during distance learning, they have become mandatory and increasingly acquire the status of conventional ones.

In connection with modern trends in the use of ICTs in educational institutions, I. Nikolayesku [14] notes “the main functional tasks of structural divisions are undergoing changes, their advisory function is being strengthened,” and the author’s own experience of this study confirms that in the conditions of distance learning, this is especially reflected in the work of teachers. This need, although it does not facilitate the process of teaching future educators, helps them better navigate different sources of information, get acquainted with different views on the same problem, find common ideas and differences in them, form a culture of communicating information to other participants in the educational process and build a personal competitive trajectory for implementation in the future profession.

Training of future educators in a higher education institution lasts at least 4 years. The use of ICTs during these years during classes in various disciplines, and in other activities of students, contributes to the accumulation of experience in using ICTs for further implementation in their future professional activities, develops a culture of working with various information and a culture of communicating information to students.

I. Tymofeieva [10] notes that when gaining experience in the use of ICTs during training in a higher education institution, the future teacher begins to form the ability and need to develop their own “electronic products” that would reflect teacher’s own vision of the upbringing and comprehensive development of children and which the future teacher would be able to adjust, focusing on the specific conditions of professional activity. The researcher points out the importance of information and communication competencies that students acquire in various types of their activities and which are components of key competencies and also emphasises the need for the use of ICTs by teachers. And this, in turn, requires updating and partial replacement of conventional means and methods of teaching in a higher education institution.

The information environment, that is, everything that surrounds the student is constantly undergoing changes, V. Kurok and A. Hritchenko pay attention to this fact in their paper [16], and therefore, working with new information “determines the need for continuous improvement of the teacher’s information competence”. It is important that in the process of obtaining higher education, future teachers develop information competence and readiness to improve it. The best manifestation of this competence will be the ability to convey the necessary information to children.

O. Lystopad and I. Mardarova [17] note that due to the introduction of ICTs in the educational process of preschool institutions, future teachers need appropriate training. To satisfy the child’s desire to learn new things, to obtain reliable up-to-date information about the qualities, properties of objects, environmental phenomena, the future teacher should be taught to use all possible sources of information and resources, including information and communication. The author of this study agrees with this, because it is the independent thorough work done by the teacher on the selection of information that will contribute to the systematisation and updating of previously established connections between known facts for the teacher, and the communication of this information to preschoolers will contribute to the successful organisation of their cognitive activity and ensure the harmonious development of cognitive processes of preschool children.

Thus, the above analysis of scientific studies gives grounds to assert that the use of ICTs in the training of future educators positively affects their professional growth and the development of important qualities of a teacher, contributes to the establishment of their vision for the upbringing and comprehensive development of preschool children.

## MATERIALS AND METHODS

The methodological basis of the paper consists of scientific and methodological studies of theoretical and practical content, which are reflected in the list of sources used, and organisational and regulatory documents related to the field of education, in particular, higher and preschool levels. Such documents include state standards of higher education, in particular, the training of preschool specialists, the Law of Ukraine “On Higher Education”, the Law of Ukraine “On Preschool Education”, the Basic Component of Preschool Education, the Concept of NUS and instructional and methodological recommendations for ensuring the continuity of preschool and primary education, references to which take place in this paper.

To achieve this goal, the author used the following general scientific research methods: analysis, synthesis, systematisation, observation, conversation, survey, generalisation, and personal experience.

Methods of analysis and synthesis were used for a more detailed investigation of the previously studied main aspects of professional training of future teachers, including educators, which influence the development of positive qualities of a teacher of preschool children, provide for the use of ICTs in this process, give students the opportunity to determine the advantages of using ICTs in future professional activities. The analysis of research on the use of ICTs for the development of the information culture of future educators during higher education and the establishment of a culture of communicating information to preschool children was also carried out. It was found exactly how the development of the information culture of future educators can affect the logical and mathematical skills of preschool children.

Based on the systematisation and generalisation of various approaches and views of researchers, the author concluded that the introduction of ICTs at different stages of higher education and the availability of appropriate conditions positively affect future educators' practical skills in working with various information and the culture of communicating information to preschool children to ensure their development, in particular, logical and mathematical.

As for the methods of empirical research, the author conducted conversations with teachers and observed the work of students during tasks that involve working with various information, and requiring the use of ICTs. In the course of the study, the author tried to find out which types of information are easier and more interesting for students to work with, and what causes difficulties.

The paper also highlights the author's own views on this issue, which were formed during many years of professional training of future educators.

## RESULTS AND DISCUSSION

The activity of teachers in the upbringing and training of modern preschool children should be aimed at the ability to convey up-to-date and reliable information to children about the world in which they grow up and which is changing very quickly under the influence of various factors.

I. Chaika defines the concept of "information culture of the future educator" as "optimal ways to work with signs, data, information, and provide them to the user to solve theoretical and practical problems; development of the training system, preparation of a person for the effective use of information tools and information" [24, p. 18]. It is this understanding of information culture that the author of the study applies since it is most suitable for this research.

The culture of communicating information to children is considered as the ability of an adult, in particular, a teacher, to inform children in an accessible form of truthful information that contributes to the comprehensive harmonious development of children, corresponds to their age and individual characteristics, and does not harm the mental health of preschoolers.

The author defines the process of development of future teachers' culture of information delivery to preschool children as the process of providing future teachers with professional theoretical knowledge, practical skills in organising work with preschoolers, and skills in working with information, the use of which in professional activities would maximise the overall harmonious development of children, and the development of their ideas in all educational areas provided for by the basic component of preschool education. That is, it is a long-term complex interaction of participants in the educational process of a higher education institution (teachers and students), which requires the involvement of various forms, methods, techniques, and means of teaching, and the use of ICTs as a means of teaching and as a tool that ensures the educational process in different working conditions.

Considering these interpretations, it becomes clear that the development of an information culture and a culture

of communicating information to children is an important task that teachers need to solve when providing educational services for students of the speciality "Preschool education", including using information and communication technologies.

Studying the "information and communication culture of future educators" A. Klieba [23] draws attention to the fact that the use of ICTs in the training of future teachers performs a number of didactic functions, to which the researcher refers: educational; organisational; functions of control and development of motivation, interest, thinking, skills of educational and cognitive activity, which prepares students for the use of ICTs in future professional activities. In order for the use of these technologies to lead to the implementation of the learning goal, the teacher (in the development of readiness of future educators for professional duties) and students (as future educators) should be guided by the didactic principles of visibility, activity and independence, scientific, accessibility and compliance, problemativeness, consistency, individualisation and differentiation, and optimisation in the provision of educational services. That is, compliance with these principles will ensure high-quality professional training of students and will contribute to the consideration of the principles of teaching and upbringing of children in the performance of professional pedagogical duties by future educators.

The quality of preschool education is determined by the nature of communication and interaction between an adult and a child, as noted by O. Mkrtichian [18]. This thesis of the researcher complements the beliefs of A. Klieba. The author of this study shares the views above and adds that the basis of such communication and interaction is the developed ability of the teacher to work with information and transmit information to children, and constant self-improvement of existing skills and the acquisition of new ones. The level of culture of communicating information to children, available to the teacher, directly affects the quality of education of preschool children.

The requirements of the present for the development of the child's personality and the conditions for ensuring the educational process of preschool education institutions are such that the activities of educators provide for the mandatory ability to apply ICTs for the development of children and the formation of logical, critical and creative thinking, the ability to act independently or make decisions in various life situations. The author of this study suggests that the development of these skills in children is most consistent with their logical and mathematical development, the features of which future teachers can learn from the course "Theory and methodology of formation of elementary mathematical ideas" (TMFEMI), and finds confirmation of their opinion in the paper by L. Ishchenko [20], N. Lazarovych and S. Chupahina [21], I. Taran [15], K. Shcherbakova and O. Brezhnieva [22] and others. During the study of this discipline, students get acquainted with: questions of the theory of elementary mathematics; features of the development of children's ideas about the set, number, size, shape, space and time; methods

and means of forming elementary mathematical ideas of children in different age groups of preschool education, comparing them with the requirements of didactics. Such familiarisation takes place in various ways, including using information and communication technologies.

According to the basic component of preschool education in Ukraine, the logical and mathematical competence of preschool children is attributed to the key competencies of preschool children, the acquisition of which is a complex and multidimensional process consisting of interrelated and complementary ways of familiarising children with various mathematical concepts: the set of objects and objects, their shape, colour and size; the space in which they are located, the location of objects and objects in it; ways to measure different quantities; properties of time and its course; numbers, their composition; ways to determine the number of objects, their properties and relationships, and many others that are necessary for a small child to form a “complete picture of the world”. The role of educators in this process is to help children to master the “mathematical language”, to develop children’s ability to speak and write in this language, that is, to provide favourable conditions for preschool children to enter the world, which can be described by the laws of logic and mathematics.

Among the main tasks of preparing future educators for the formation of elementary mathematical ideas and logical thinking of children (that is, to the development of a culture of communicating logical and mathematical information), including by means of ICTs, I. Taran highlights [15]: the study of the existing positive and negative experience of using ICTs in the logical and mathematical development of preschool children; the systematisation of this experience and the addition of positive aspects with modern pedagogical techniques for forming mathematical ideas in children; the use of ICTs by students during classes, performing independent tasks in higher education institutions, and during pedagogical practice in institutions of preschool education.

Communicating information to children that contributes to their logical and mathematical development is possible only when the teacher has a good grasp of the necessary information, that is, appropriate mathematical knowledge and categories, and has a well-developed logical thinking. Given this, the readiness of future educators to ensure the logical and mathematical development of preschool children, their personal growth and professional development is seen by L. Artemova [7] in the ability of students to transform knowledge into beliefs, improve certain skills that motivate them to their chosen profession and are reflected in the performance of various tasks, and in practical activities during the course of pedagogical practice.

Considering the own pedagogical experience of teaching future educators and the experience of colleagues, and the results of monitoring the work of students, it is worth noting that it is possible to use ICTs to develop students’ information culture and culture of communicating information to children, which would contribute to their logical and mathematical development, when:

- students perform tasks that involve the use of information from various information sources, including electronic resources and the Internet, and its processing. These tasks include: develop your own materials on the specified topic or choose from those developed by someone (interesting data about mathematics “around us”, interesting facts from the history of mathematics for children, physical activity breaks, riddles, rhymes, math games, etc.);
- independent development of visual educational material by students (images of geometric shapes, especially spatial ones; tables; diagrams; associative games; handout materials; presentations, etc.);
- preparation for older preschoolers of game exercises that will be performed using a computer (for example: the child needs to count the number of objects, the image of which is displayed on the screen, and press the appropriate numeric key; the child needs to familiarise themselves with the entry of arithmetic problem in which the number is missing, and then, after reasoning, the child needs to enter the chosen number from the keyboard, etc.);
- development of a diagnostic scheme by students for the level of logical and mathematical development of preschool children, etc.

Guided by the analysis of the results of international and Ukrainian monitoring of the level of mathematical training of Ukrainian schoolchildren, K. Hnezdilova draws attention to “the need to build a clear strategy to improve the quality of teaching mathematics to children, starting with preschool education institutions” [19, p. 123-124]. The researcher notes that in the process of professional training of future teachers, it is necessary to focus on improving existing methods and means of teaching children mathematics and developing their logical thinking, and on updating pedagogical tools in accordance with modern needs. Referring to the Law of Ukraine “On Higher Education” and the Concept of the New Ukrainian School, the researcher notes that such means of creating a comfortable environment for the logical and mathematical development of preschool children include ICTs. And this, in turn, means that future educators should be prepared for this.

ICTs as learning tools contribute to the development of a culture of future educators to convey information, and strengthen the learning process, making it interesting and dynamic, can include virtual platforms, in particular, developmental and educational areas. The possibilities of such platforms, on which preschool children can perform various developmental tasks, including logical and mathematical ones, should be introduced to both future educators and those who are already working in preschool institutions today, as noted by K. Hnezdilova in her study. In addition, future teachers must realise that such work of children must be monitored for the time of completion and comply with sanitary and hygienic standards and requirements in the process of implementation. The researcher drew attention to various online resources, which include those that the author of this study also uses when working with students, in particular: Matific, LearningApps, MathGames etc.

Observations of preschoolers while performing exercises posted on these platforms, conversations with caregivers and parents of children conducted by the author of this study indicate that such tasks are extremely interesting for preschool children. Their balanced selection and alternation with more conventional tasks will indicate a high professional culture of the teacher and the ability to correctly convey information to children that would ensure the necessary level of logical and mathematical development of preschoolers. As for students who are future educators, they also like to complete tasks posted on online resources, and especially create their own. The development of new exercises by students contributes to the improvement of their mathematical knowledge and logical reasoning, provides an opportunity to demonstrate their individuality, creativity, and practical skills in working with various types of information, in particular, text, sound, graphic, numerical, and combined. Tasks created on these platforms will always be available, and future teachers will be able to adapt them, if necessary, to the age and individual characteristics of those preschool children with whom they will interact.

Based on personal experience of training future educators and using ICT to develop their culture of communicating information to preschool children, including to ensure the logical and mathematical development of preschool children, the author of the study draws attention to tasks that develop the following subject skills and abilities in students: "strict approach to knowledge and formulation of mathematical terms and concepts; ability to operate relationships and connections of mathematical objects; ability to generalise mathematical material, highlighting the main object; ability to operate with numbers and symbols; switching from one mental operation to another" [25].

Performing such tasks, in addition to improving the mathematical training of future teachers, develops the information culture of students, since it requires them to know about various logical operations that can be performed with information, in particular: search and selection, meaningful reading and processing, folding or unfolding, storing, transmitting, and reproducing information. Such tasks were divided into three groups.

The first group of tasks: has a theoretical focus and involves the search and processing of information using various information sources and its presentation in oral form. They provide an opportunity to develop such components of the information culture of future educators as speech culture and mathematical culture, that is, the correct interpretation and application of mathematical concepts and terms. Examples of such tasks include:

- 1) using textbooks/manuals, mathematical reference books, the Internet, lecture notes, prepare information about geometric shapes that are introduced to young and middle-aged children;
- 2) determine the topic to which the proposed task belongs;
- 3) present the submitted text information in the form of a short record, table, or diagram;

4) compare different task texts and draw an analogy, compare data, etc.

The second group of tasks: partially theoretical and at the same time partially practical. These tasks are aimed at improving students' skills to process information and separate logically completed blocks in it. Students can submit the result of their activities in various forms. Examples of such tasks are the following:

- 1) divide the text of the task/problem into semantic parts, draw up a plan for implementation/solution, and comment on it if necessary;
- 2) prepare questions for the submitted text of the task/problem;
- 3) create multiple presentation slides on the specified topic for use in the classroom with children of certain preschool age;
- 4) collapse the submitted text into a reference synopsis;
- 5) create an algorithm for completing the task/problem.

The third group of tasks: tasks with a logical load that encourage students to critical understanding, creative development, establishing analogies and patterns, developing project skills, creating their own developments, and a holistic vision of the result. Examples of such tasks include:

- 1) determine what data is missing in the task and where it can be taken from;
- 2) prepare didactic material (or didactic electronic material) on the specified topic of the lesson;
- 3) prepare and present an individual/group project with a mandatory presentation on the chosen topic (for example, "numbers in proverbs and sayings"), establish intersubject connections and practical significance of the project, etc.

Thus, the use of ICTs in the professional training of future educators takes place not only for the transfer of knowledge from teachers to students, but also for the purpose of teaching students to work independently with available information, planning educational activities of children, real assessment of the results of their work, creating conditions for choosing different ways to search and process new information, logical construction of stages of work with it and for using the acquired skills in the development of preschoolers. All this contributes to the development of a culture of communicating information to preschool children among future teachers.

## CONCLUSIONS

Training of future teachers determines the initial steps and provides conditions for the personal development of a teacher of preschool children. Performing tasks that require high-quality subject knowledge, developed logical and critical thinking, responsible work with various information, and presentation of the results of their efforts makes students conscious participants in the educational process and contributes to the development of their professional competencies.

The work done by the author of this study gives grounds to conclude that the professional development of future educators occurs under any conditions of the institution of higher education, and the possibilities of ICTs ensure the performance of the functions of training tools. ICTs allow

all participants in the educational process, who are located at a long distance, to interact. Obeying didactic principles, they ensure the implementation of the goal of learning, focused on the needs of the future. Modernisation of traditional and introduction of modern methods and technologies of teaching in higher education, and a balanced approach to creating a system of tasks, which the author highlighted in this study, encourage students to active research and exploration activities, strengthen their interest in the chosen profession of a teacher, evoke positive emotions in future educators, give them the opportunity to show their creativity. Such tasks are aimed at mastering the basics of general and subject mathematical knowledge, which are necessary for performing professional duties for a teacher of a preschool education institution, as much as possible.

The experience of using various information resources and ICTs during the study of professionally oriented academic subjects at the university allows future educators to acquire personal and professional skills: search, selection, and critical understanding of information; creation

of their own didactic materials; application of ICTs in the educational process of preschool education and ensuring the cognitive needs of children; self-development and professional growth. Rich and interesting work with mathematical information helps future teachers systematise their knowledge of mathematics, and also enhances the process of forming their culture of communicating information to children, which contributes to the comprehensive development of preschoolers, including logical and mathematical.

This study does not cover all aspects of the use of information and communication technologies in higher education and the development of the information culture in future educators. In further studies, it is possible to expand the range of tasks that will strengthen the process of developing professional skills and abilities of future educators, contribute to the improvement of their information culture and become a reliable tool for them in the process of communicating high-quality information to preschoolers that would relate to various educational areas of their development.

## REFERENCES

- [1] Approved higher education standards. (n.d.). *Official website of the Ministry of Education and Science of Ukraine*. Retrieved from <https://mon.gov.ua/ua/osvita/visha-osvita/naukovo-metodichna-rada-ministerstva-osviti-i-nauki-ukrayini/zatverdzeni-standarti-vishoyi-osviti>.
- [2] Law of Ukraine No. 1556-VII "On Higher Education". (2014, July). Retrieved from <https://zakon.rada.gov.ua/laws/show/1556-18#Text>.
- [3] Law of Ukraine No. 2628-II "On Preschool Education". (2001, July). Retrieved from <https://zakon.rada.gov.ua/laws/show/2628-14#Text>.
- [4] Order of the Ministry of Education and Science of Ukraine No. 33 "On the Approval of the Basic Component of Preschool Education (State Standard of Preschool Education). New Edition". (2021, January). Retrieved from <https://mon.gov.ua/ua/npa/pro-zatverdzhennya-bazovogo-komponenta-doshkilnoi-osviti-derzhavnogo-standartu-doshkilnoi-osviti-nova-redakciya>.
- [5] Ministry of Education and Science of Ukraine. (2016). *New Ukrainian school: Conceptual foundations of secondary school reform*. Retrieved from <https://mon.gov.ua/storage/app/media/zagalna%20serednya/nova-ukrainska-shkola-compressed.pdf>.
- [6] Continuity between preschool and primary education. (n.d.). *Official website of the Ministry of Education and Science of Ukraine*. Retrieved from <https://mon.gov.ua/ua/osvita/doshkilna-osvita/nastupnist-mizh-doshkilnoyu-ta-pochatkovoyu-osvitoyu>.
- [7] Artemova, L.V. (2013). Personal growth and development of a student in the conditions of a higher educational institution. *Psychological Sciences: Problems and Achievements*, 4, 24-35.
- [8] Belenka, A.V. (2012). Modern approach to the issue of formation the professional competence of future pre-school teacher. *Update of the Content, Forms and Methods of Learning and Education in Educational Institutions*, 5, 99-102.
- [9] Semchuk, S. (2013). Formation of informational and communicative competence of future preschool teachers. *Problems of Modern Teacher Training*, 8 (Part 2), 29-33.
- [10] Tymofeieva, I.B. (2017). *Formation of information and communication competence of future specialists in preschool education* (PhD thesis, National Academy of Educational Sciences of Ukraine, Kyiv, Ukraine).
- [11] Wittenberg, K.Yu. (2010). *Preparation of the future educators at the kindergarten by means of information-communication technologies for training children to foreign language* (PhD thesis, Kherson State University, Kherson, Ukraine).
- [12] Zaporozhtseva, Yu.S. (2019). Information and digital competence as a component of modern educational process. *Innovative Pedagogy*, 12(1), 79-82. doi: 10.32843/2663-6085.2019.12-1.15.
- [13] Kravchyshyna, O.O. (2017). Formation of the conative component of the readiness of future educators to use ICT in the process of solving pedagogical situations. *Ukrainian Scientific and Pedagogical Collection*, 10, 113-117.
- [14] Nikolayesku, I.O. (2019). Virtual educational platforms as a pedagogical tool for professional training of future teachers of preschool education institutions. In *Abstracts of reports of the VII International scientific and practical conference "Information technologies in education, science and production (ITESP2019)"* (pp. 59-63). Lutsk: Lutsk National Technical University.
- [15] Taran, I.B. (2014). Organization of training of future educators for the use of information and communication technologies in the conditions of a preschool educational institution. *Collection of Scientific Papers of Uman State Pedagogical University*, 3, 349-356.

- [16] Kurok, V., & Hritchenko, A. (2021). Formation of future teacher's readiness for the information competence self-design in the educational environment of higher education establishments. *Problems of Modern Teacher Training*, 2, 104-112. doi: 10.31499/2307-4914.2(24).2021.244214.
- [17] Lystopad, O.A., & Mardarova, I.K. (2021). *Theoretical and methodological principles of forming the readiness of future educators to use information and communication technologies in the organization of cognitive activity of students*. Odesa: FOP Bondarenko M.O.
- [18] Mkrtichian, O. (2020). Formation of readiness of future educators for professional activity as a psychological and pedagogical problem. *Topical Issues of the Humanities*, 33 (Vol. 2), 247-253. doi: 10.24919/2308-4863.2/33.215882.
- [19] Hnezdilova, K.M. (2020). Training teacher candidates for developing children's logical mathematical intelligence with ICT. In *Development of intellectual skills and creative abilities of pupils and students in the process of learning the disciplines of the natural and mathematical cycle "ITM\*plus - 2020": Materials of the III International distance scientific and methodical conference* (pp. 122-124). Sumy: FOP Tsioma S.P.
- [20] Ishchenko, L.V. (2013). *Pedagogical technologies of supporting the process of formation of elementary mathematical concepts in preschool children*. Uman: PP Zhovtyi.
- [21] Lazarovych, N.B., & Chupahina, S.V. (2015). *Logical and mathematical development of preschool children*. Ivano-Frankivsk: Vasyl Stefanyk Precarpathian National University.
- [22] Shcherbakova, K., & Brezhnieva, O. (2011). Training prospective teachers to provide logical and mathematical development of preschool children. *Native School*, 4-5, 35-39.
- [23] Klieba, A.I. (2017). *Formation of informational and communicative culture of future educators*. Kharkiv: Municipal Establishment "Kharkiv Humanitarian-Pedagogical Academy" of the Kharkiv Regional Council.
- [24] Chayka, I. (2012). *Information culture of the student*. Ternopil: Publishing House of Ternopil Volodymyr Hnatiuk National Pedagogical University.
- [25] Kovalenko, O.A. (2020). *Formation of mathematical culture of students – future educators in the process of studying mathematics* (Master's thesis, Bohdan Khmelnytsky National University of Cherkasy, Cherkasy, Ukraine).

**Оксана Анатоліївна Коваленко**

Черкаський національний університет імені Богдана Хмельницького  
18031, б-р Шевченка, 81, м. Черкаси, Україна

### **Формування в майбутніх вихователів інформаційної культури та культури донесення інформації до дітей**

**Анотація.** Актуальність проблеми використання інформаційно-комунікаційних технологій у навчальному процесі закладів вищої освіти як ефективного засобу навчання в сучасних умовах продиктована самим життям. Система пасивного передавання знань від викладачів до студентів у минулому, а тому майбутнім фахівцям доводиться досить значний обсяг навчального матеріалу опанувати самостійно. Для цього вони повинні використовувати різні джерела інформації, щоб відібрати достовірний і актуальний матеріал. Для формування професійних компетентностей майбутнього педагога, зокрема вихователя, недостатньо лише ознайомитися з інформацією. У студентів необхідно формувати культуру роботи з інформацією, яка охоплює вироблення умінь і навичок самостійного відбору інформації, її опрацювання, вдалого застосування та передавання в різний спосіб. Саме такі набуті уміння і навички стануть у пригоді майбутнім вихователям, коли їм треба буде забезпечувати освітній процес у закладі дошкільної освіти та доносити потрібну інформацію до дітей дошкільного віку. Метою статті є розкриття різних поглядів і підходів до використання інформаційно-комунікаційних технологій у професійній підготовці майбутніх вихователів, зокрема для формування в них навичок роботи з різною інформацією та культури донесення її до дітей дошкільного віку. Основою статті є аналіз науково-методичних досліджень, які стосуються проблематики використання інформаційно-комунікаційних технологій, що впроваджуються на різних етапах і з різною метою під час професійної підготовки майбутніх педагогів у закладі вищої освіти. Також у статті наводиться приклад спеціально розроблених завдань, які сприяють формуванню інформаційної культури студентів – майбутніх вихователів і формуванню у них культури донесення інформації для забезпечення розвитку дітей дошкільного віку, зокрема логіко-математичного. Матеріал статті може бути корисним науковцям, які досліджують упровадження інформаційно-комунікаційних технологій у вищій школі й формування інформаційної культури майбутніх педагогів; викладачам, які навчають студентів спеціальності «Дошкільна освіта»; вихователям дітей дошкільного віку в процесі самоосвіти та виконання професійних обов'язків

**Ключові слова:** інформаційно-комунікаційні технології, професійна підготовка, педагог закладу дошкільної освіти, робота з інформацією, уміння ділитися інформацією, логіко-математичний розвиток, дошкільнята