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Methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies

Abstract. In modern digital world, the importance of information literacy comes to the fore, especially in the field of education. Providing future primary school teachers with the necessary skills in this area is of strategic importance for the effectiveness of their work and successful adaptation to the requirements of the modern educational space. This article was devoted to the study of methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies. Theoretical analysis, comparison, synthesis, modelling and generalisation methods were used to study the formation of information literacy in future primary school teachers using computer-based learning technologies. The article deals with methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies. The authors of the study analysed in detail the current state of the issue and identified the basic principles and methods that should be used for the successful implementation of this process. The study has identified key aspects that need to be taken into account in the formation of information literacy in future teachers, as well as recommendations for the use of computer technologies to achieve this goal. It was emphasised that the choice of methodological approach depends on the learning objectives, age and level of training of students, as well as on the material and technical support of the educational institution. The article emphasised the importance of using computer-based learning technologies to develop information literacy, as they allow creating interactive and dynamic learning environments, providing access to information resources, developing skills in searching for and evaluating information, and teaching how to use information to solve real-world problems. The authors of the article concluded that the formation of information literacy of future primary school teachers is a complex task that requires the use of various methodological approaches and computer-based learning technologies. The results of the study may be useful for researchers in the field of education, as well as teachers interested in the integration of computer technologies into the educational process

Keywords: innovative approaches; information literacy; competencies; teaching methods; digital society

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INTRODUCTION

In modern world, information literacy (IL) is becoming a key competency required for successful professional activity. This is especially true for future primary school teachers, who must not only possess these skills but also teach them to their students. In this context, it is important to consider methodological approaches to the formation of information literacy using computer-based learning technologies (CBLT). Computer technologies play a crucial role in the process of forming IL. They provide access to a large amount of information, promote the development of critical thinking and independent learning skills, and provide an opportunity to integrate various information resources and tools into the educational process.

With the development of information and communication technologies and the global integration of digital resources, information literacy is becoming a prerequisite for successful functioning in society. It forms the basis for lifelong learning, promotes critical thinking, and allows for informed decision-making. Information literate people can effectively use information resources to solve complex problems they face in their daily lives and professional activities. Educational institutions play an important role in fostering information literacy by providing students with the necessary knowledge and skills to successfully navigate the complex information environment. The use of technology in education, such as computers, the Internet, and multimedia resources, contributes to improving the quality of education and training competent professionals. Information literacy is becoming an integral part of the educational process, forming critical thinkers and adaptive individuals capable of self-education and innovation.

It is also important to take into account the individual characteristics of future primary school teachers when forming their information literacy with the help of computer technologies. Such an approach will effectively prepare teachers for the challenges of our time and ensure their readiness for the development of children in the context of the digital transformation of education. Since the original concept of information literacy was developed and evolved from library search technology, it itself contains a comprehensive quality of searching and acquiring, analysing, and using information. Scholars have different understandings of the content included in information literacy.

O. Ishutina & Yu. Chernikova (2023) believe that information literacy should be promoted in the media, educational institutions, libraries, archives and museums. Particular attention should be paid to the training of employees working in these fields, because information literacy is not only a skill, but a constant process of perceiving information, the dynamics of cognition and the accumulation of practical experience. According to the authors' generalised opinions, infomediate literacy of primary education participants can be defined as a set of cross-cutting knowledge, skills and abilities necessary for active and conscious interaction with media and information in society. This knowledge is based on the ability to think critically

and work with different types of information, as well as the ability to use and create various media products both in the learning process and for their own communication needs. In the media education manual V. Baidyk & O. Pronina (2021) consider information literacy as a set of competencies and it is worth noting that information literate people have key skills such as critical thinking, the ability to analyse information and use it for self-expression, the ability to learn independently, create information, and the desire to be an informed and competent citizen and professional. It is noted that for high information literacy it is important to use a variety of sources of information, to be able to critically evaluate it and to apply the information received to meet one's own information needs using critical thinking skills.

According to A. Gedzik & E. Kilderov (2021), teacher information literacy refers to the ability of a teacher to consciously collect, analyse, filter, and process network resources based on the possession of certain knowledge about information technology. They have the ability to integrate knowledge and develop new knowledge based on the characteristics of their own discipline. Information literacy is a necessary stage in the formation of information competence, as the latter begins to develop at the moment of a person's first acquaintance with information and communication technologies and their use in everyday life. Information literacy is the basis for a continuous and long-term learning process in any discipline, educational environment and at all levels of education. T. Panychok (2023) believes that information literacy enables citizens to be critical of information, form their own vision of events, and respond adequately to them. Therefore, it is important to support projects that promote the development of information awareness in Ukraine and ensure public access to reliable and high-quality information. The author notes that this approach is the only way to increase the level of civic awareness and the readiness of society to meet modern challenges. Integrating artificial intelligence into education from an information literacy perspective offers numerous benefits, including personalised learning experiences, data-driven insights, and improved critical thinking skills. However, to ensure equal opportunities for access and use of AI tools, it is important to address issues such as ethical aspects, algorithmic bias, and the digital divide, according to Ya. Shchogolev (2024).

H. Onkovich (2020) defines media and information literacy as a set of institutions, knowledge, skills and abilities that allow a person to understand when and what information is needed, as well as where and how it can be found. This concept, according to the scientist, goes beyond communication and information technologies, encompassing the skills of critical thinking, analysis, and interpretation of information in various professional and educational fields. Media and information literacy includes mastery of all types of information resources and serves as the basis for a continuous learning process that applies to any discipline, educational environment and level of education. The

purpose of the article was to study modern methodological approaches to the formation of information literacy of future primary school teachers and to determine the prospects for the development of information literacy.

MATERIALS AND METHODS

To study methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies, several methods were chosen that provided a comprehensive analysis and allowed to obtain reliable results. The method of comparison allowed comparing different methodological approaches and technologies used to develop information literacy. This study conducted a comparative analysis of traditional and modern teaching methods, the effectiveness of various methods and tools for achieving educational goals. The advantages and disadvantages of using computer technologies in the training of future primary school teachers are revealed.

Using the synthesis method, the relationship between different methodological approaches and their practical application was found. The influence of computer technologies on the development of information literacy is determined, which helped to systematise knowledge, identify key components of the process and develop recommendations for practical implementation. Based on the analysis of scientific literature, the main theoretical approaches to the definition and understanding of information literacy were summarised. The key principles and characteristics of information literacy that are common to different research approaches are identified. On the basis of the generalised data, practical recommendations for future primary school teachers on the effective use of computer technology were formulated. Generalised conclusions about the best practises of information literacy formation are made.

The use of the above research methods provided an integrated approach to the study of the problem of forming information literacy of future primary school teachers using computer technologies. This allowed not only a deep understanding of theoretical aspects, but also practical recommendations for improving the educational process. A variety of materials were also used to comprehensively study the topic and obtain reliable results. The scientific literature provided access to the latest research and empirical data, which allowed us to get acquainted with current achievements and problems in the field of information literacy and the use of computer technologies in education. This made it possible to critically assess the current state of the issue and identify gaps in knowledge. Among the scientific literature reviewed for this study are: A. Blozva & N. Tverezovska (2011) and O. Mostipan (2015).

The curricula, in particular, helped to define the requirements for the training of future primary school teachers and the inclusion of information literacy in the educational process. They provided a normative framework for the study and helped to adapt it to the specific conditions of the educational system. Electronic resources and online

platforms served as an important source of information about modern technologies, tools and teaching methods. They allowed us to get acquainted with the practical aspects of using computer technologies in the educational process and to get access to real examples of their implementation. These platforms included Coursera, edX, Khan Academy, and Prometheus. The use of various research materials provides a comprehensive approach to the study of the problem of forming the information literacy of future primary school teachers using computer technologies.

RESULTS AND DISCUSSION

Information literacy has become an important skill in today's society, where information plays a key role in everyday life, education, and professional activities. In modern work environment, an information literate specialist will have a number of advantages: they will know how to work with information technology, be able to find the best information and constantly strive to update their knowledge in their chosen field. Educators should interest young people in using scientific electronic resources that allow them to model situations of educational choice and create conditions for students' intellectual and creative expression (Blozva & Tverezovska, 2011). In the digital era, when access to information has become much easier, but its quality is not always reliable, information literacy has become essential for successful functioning in society.

Many libraries now have high-tech equipment and Internet access, which helps students acquire the skills to search, analyse, and use information for learning, and teachers to quickly find the right materials online (Koroban & Kobyljanska, 2020). The concept of "information literacy" began to be used in the 1990s as a result of combining approaches to the study of information culture. On the one hand, it took into account the position of library science and scientific information activities, and on the other hand, it emphasised the importance of computer skills. The process of studying information literacy, its importance in the development of technologies, the formation of the information society and the formation of skills for careful handling of information was mentioned in the UNESCO "Alexandria Declaration on Information Literacy and Lifelong Learning" adopted in 2005 (Alexandria Declaration, 2005).

Information literacy includes the ability to locate, evaluate, use, and communicate information effectively and ethically. It is an essential skill for teachers as they are expected to manage the learning process using a variety of information resources and technologies. For primary school teachers, these skills are critical, as they allow them to be effective in their professional activities, adapt the learning process to modern requirements, and help students develop the competencies necessary for life in the information society. The CILIP Information Literacy Group has developed the CILIP 2018 definition of information literacy and emphasises the relevance of information literacy in the current era: "Information literacy is the ability to think critically and make informed judgements about the

information we encounter and use. It empowers us as citizens to form well-informed views and engage fully with society” (CILIP, 2018).

Information literacy is the ability to think critically and make informed judgements about any information we find and use. It enables citizens to form informed opinions and fully interact with society (own translation). Information literacy is an integral part of a modern person’s competence. It provides the ability to work effectively with information, make informed decisions, and protect oneself from misinformation. Building information literacy requires a comprehensive approach that includes both formal and non-formal education, the use of modern technologies, and active participation in practical projects. With the development of information and communication technologies, the ability to master network, digital, Internet, technological, and media literacy has become especially important. Computer literacy and media literacy have gained an advantage over other types of literacy (Vashchenko, 2020). The development of these skills contributes to professional and personal growth, ensuring success in the modern information society.

S. Sysoieva (2005) notes that it is important for a modern teacher to have an idea of the directions of development of the rapidly changing world, to constantly improve their skills and abilities, to develop information literacy and creativity of the individual throughout life. Thus, the training of a future primary school teacher includes not only knowledge of subjects but also mastery of modern computer technologies. The introduction of computer technologies into the educational process is an integral part of modern education. The teacher must adapt to new information technologies, meet the modern requirements of higher education, effectively choose and apply those technologies that contribute to the achievement of educational goals, thereby constantly improving their professional competence (Kravchenko, 2020). Students used computers and the Internet to search for and access a large amount of information, electronic resources, scientific articles, and textbooks, which they used to learn new material and prepare for classes (Platonova, 2023). Computer-assisted learning technologies offer a wide range of tools and methods that can greatly help in the development of

information literacy of future primary school teachers. These are some of the key advantages of using CBLT for the development of IL:

Improved access to information. CBLTs provide learners with access to limitless sources of information, including online libraries, databases, encyclopedias, and learning resources. This allows them to independently research topics of interest and find reliable sources of information. CBLT offer a wide range of interactive and engaging learning methods that can make the IL training process more interesting and effective. These methods include:

- educational games and simulations: can help students learn complex concepts and skills related to il in a fun way;

- web quests: allow students to explore topics through prompts and interactive tasks;

- social media and online communities: can help students interact with peers and experts, exchange ideas, and receive feedback on their research;

cbлт can help learners develop the skills needed to work effectively with information, such as:

- information search: cbлтs provide access to powerful search tools that help learners find relevant information quickly and easily;

- evaluation of information: students can learn how to critically evaluate the accuracy and reliability of information from different sources;

- information processing: cbлтs offer tools for organising, analysing, and synthesising information;

- information creation: students can use cbлтs to create their own presentations, reports, websites, and other multimedia projects.

Preparing for life in the information society. In today’s world, people are constantly faced with huge amounts of information. The ability to effectively search for, evaluate, and use information is a vital skill for success in school, work, and personal life. CBLT can help students develop these skills and prepare for life in the information society. The choice of teaching methods for information literacy is an important task that should be solved taking into account all the factors that influence this process. The main methods of teaching information literacy are presented and their comparative analysis is carried out (Table 1).

Table 1. Comparative analysis of methods of information literacy formation

	Advantages	Disadvantages
Traditional methods	<ul style="list-style-type: none"> ➤ Familiar and understandable forms of education. ➤ Possibility of direct interaction with the teacher. 	<ul style="list-style-type: none"> ➤ Limited access to modern information resources. ➤ There is little interactivity and practical training.
Modern methods	<ul style="list-style-type: none"> ➤ Access to a large number of information resources. ➤ Interactive and practical classes. ➤ Flexibility in learning. 	<ul style="list-style-type: none"> ➤ High demands on technical support. ➤ The need for additional skills to work with computer technology.

Source: compiled by the authors

Basic theoretical knowledge is imparted through traditional forms of education, such as lectures and seminars. These methods are effective for imparting basic knowledge,

but may be insufficient for developing practical skills. Practical classes, such as labs and workshops, help students apply theoretical knowledge in practice. However, in the case

of information literacy, it is important to provide access to modern information resources and technologies. Modern approaches using computer technology include the use of e-courses, which allow access to learning materials at any time and from any place. Such courses can include interactive elements that promote active student engagement. Virtual labs and simulations allow students to gain practical skills in working with information resources in a safe and controlled environment. Massive open online courses provide teachers with the opportunity to learn from leading experts from different countries, allowing them to gain the most up-to-date knowledge and skills. Mobile applications allow teachers to learn on the go using their smartphones or tablets. This is especially useful for teachers who have limited time for training. As O. Mostipan (2015) rightly notes, the process of forming students' information literacy requires an individualised approach, including various types, forms, methods and training programs, taking into account their professional specialization, level of information needs and level of information training, as well as the availability of computer knowledge. As for the methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies, they may include:

Constructivist approach. The constructivist approach is based on the principle that knowledge is acquired through active interaction of the learner with the environment. In the context of information literacy, this means creating conditions for independent research, information analysis, and problem solving. Teachers can use computer technology to create situations where students are actively involved in the learning process. Examples of the constructivist approach include: using virtual laboratories for research; organising web quests where students search for information on the Internet to solve certain problems; creating projects that require the use of various information sources and tools for their analysis.

Project-based learning. This approach involves students in real-world projects that require the use of computer technology to search for and analyse information. This method promotes the development of critical thinking, teamwork, and practical skills necessary for the modern information environment. Examples of project-based learning include: creating multimedia presentations using the information collected; developing educational websites or blogs where students share their research and knowledge; completing group projects that require coordination and sharing of information resources.

Modular approach. The modular approach allows for a structured approach to information literacy by dividing the learning material into separate modules. Each module can include a theoretical part, practical tasks, and assessment of achievements, which ensures systematic and consistent learning. Examples of the modular approach include: developing training courses consisting of separate modules, each of which focuses on a specific aspect of information literacy; including tasks using various computer

programmes for processing and analysing information; conducting module tests to assess the level of learning.

Integration of computer technologies into the educational process. This may include the use of specialised training programmes, websites, video tutorials, etc. to improve students' information literacy. Examples of the integration of computer technologies include the use of software programmes for modelling physical processes; the use of interactive maps; and the use of online libraries and databases for research.

The use of specialised training programmes, websites, video tutorials, and other digital tools can significantly improve students' information literacy. The main advantages of using computer technology are the ability to individualise learning, increase time for self-education and individual assignments in disciplines, rapid growth of information flows on the Internet, and increased independent work of students, increasing motivation and cognitive independent work through appropriate forms of activity, effective organisation of cognitive activity with the help of modern modelling tools, the use of typical professional situations with the introduction of multimedia, as well as automated knowledge quality control (Mehed & Mehed, 2022). S. Honcharenko (2008) notes that one of the tasks of pedagogical science and higher education is to prepare teachers to perceive new trends in the development of science, culture and society, as well as to develop methods for their implementation in the pedagogical process, for example, through innovative teacher activities and the development of new competencies. One of the advantages of integrating computer technology into education is the availability of a large amount of information and resources on the Internet. Students can easily access a variety of knowledge sources, allowing them to expand their skills and broaden their knowledge in a short time. In addition, the use of interactive training programmes and video tutorials can make the learning process more interesting and engaging for students. They can learn the material in a playful way or through visuals, which helps to keep their attention and increase their interest in learning.

Computer technology plays a key role in the education of students in any field. Organising practical classes using computer technologies is an effective teaching method that allows students to gain practical experience in using various software tools, web services and other information resources. The use of computers, multimedia and information technologies as didactic tools helps to increase motivation, individualise learning, develop students' creative abilities and create a positive emotional state. This increases the speed of information transfer to students and the level of its assimilation, and helps to develop such processes as attention, memory, thinking, imagination, language, sense of colour and composition. In addition, these technologies contribute to the intellectual, emotional, and moral development of children (Pavlenko & Kovalenko, 2019).

One of the main advantages of this approach is that students can learn by doing, not just theoretically. They

have the opportunity to immediately apply the knowledge they have acquired to real-world problems. This contributes not only to the assimilation of the material, but also to the development of practical skills and the ability to work with various software products. In addition, this approach allows students to learn new software tools and web services, which is important for preparing for the modern labour market. Through hands-on activities using computer technology, students can feel more confident and prepared for the challenges ahead. The wealth of computer technology, such as multimedia presentations and training programmes, offers a wide range of opportunities to stimulate visual and imaginative thinking in children. The animated graphics used in these programmes help to form complete and clear ideas about the topics studied. As a result, children develop cognitive activity, stimulate search activities, and increase self-confidence (Trykoz, 2019).

Effective formation of information literacy competencies of future preservice teachers is facilitated by methodological approaches focused on interactive and engaging computer tasks. These tasks can stimulate active participation of participants, develop their skills of working with information and solving practical problems using computer technologies. As a result of this process, teachers can become more confident in their knowledge and skills in the field of information literacy. One of the most effective ways to raise the level of information literacy in society is to hold trainings and seminars on this topic. Teachers can participate in seminars and trainings organised by higher education institutions, research institutions, or general secondary education institutions, including scientific lycées (Lytvynova, 2023). These activities may include presentations by open science experts, practical exercises, and group work. During such events, participants gain knowledge on how to properly search for and verify information, how to distinguish fake news from reliable sources, how to think critically and analyse the information received.

In addition to raising the level of information literacy among participants, such trainings and seminars help to develop critical thinking and analytical skills. This, in turn, will contribute to the creation of a conscious and responsible society that is able to distinguish truth from lies and make informed decisions based on the information received. In general, the integration of computer technologies with methodological approaches can significantly contribute to the development of information literacy in future primary school teachers. The use of computer technologies in various spheres of life is becoming increasingly necessary, opening up new opportunities for optimizing processes, improving the quality of work, enhancing communication and access to information. In the educational process, the use of computer technology involves a harmonious combination of mental and learning activities, providing flexible task changes, which makes learning more meaningful and interesting. It is important that such technologies complement rather than replace or exclude other forms of learning (Sheiko, 2019). However, in addition to

the obvious advantages, there are a number of practical aspects that should be taken into account when implementing computer technologies, which are outlined below.

1. Teacher training.

One of the key conditions for successful implementation of computer technologies is teacher training. They must have the necessary knowledge and skills to effectively use these technologies in the educational process. This can be achieved through: conducting special trainings and seminars; organising refresher courses; supporting teachers' self-education through access to educational resources and materials.

2. Technical support.

Effective use of computer technology is impossible without proper technical support. Schools should be equipped with modern computers, software, Internet access and other necessary resources. This includes: equipping computer labs; providing high-speed Internet access; and maintaining and updating software.

3. Methodological support.

For the effective use of computer technologies in teaching, it is also necessary to ensure the availability of methodological materials. These may include manuals, curricula, and recommendations on the use of various technologies and tools. An important aspect is also the exchange of experience between teachers, which can be organised through: holding methodological conferences; creating professional communities of teachers; publishing articles and research in pedagogical publications. Information literacy is becoming one of the most important human competencies. It enables people to effectively search for, evaluate, use, and create information from various sources. The authors N. Kukharska & A. Lagun (2015) point out that the problem of information security in education is becoming especially important due to informatization, which forces universities to take comprehensive measures to protect information. However, the formation of ILs faces a number of problems and challenges that need to be addressed and resolved. Technical problems: insufficient technical support: many educational institutions lack modern computer technology, which complicates the process of teaching information literacy; problems with access to the Internet: the lack of a stable Internet connection can limit access to online resources and educational materials.

Methodological problems: lack of common standards: different approaches to teaching information literacy can create difficulties in assessing and comparing information literacy levels; insufficient teacher training: many teachers lack the skills to effectively teach information literacy using computer technology. Social and cultural barriers: various social and cultural factors: social and cultural characteristics can influence the perception and development of information literacy; limited access to information: in some countries, access to information may be limited or regulated, which creates additional challenges for IL education. In the digital age, when information is available 24/7 from anywhere, information literacy becomes even more

important. People are faced with huge amounts of information from various sources, and they need to be able to critically evaluate it, distinguish between facts and opinions, and use information to solve problems and make informed decisions. There are many prospects for the development of IL in the future. Here are some of the most important ones:

Artificial intelligence. The use of artificial intelligence to create adaptive curricula that take into account the individual needs and level of training of students. Artificial intelligence is a branch of science that deals with the creation of programmes and systems that have the ability to perform tasks that usually require human intelligence (Yemchyk, 2024). To understand the possibility of using AI in the educational process, it is necessary to consider the legislation on its use. But there is no law in Ukraine that regulates the use of artificial intelligence algorithms not only in education but in general. Since our country is on the way to joining the EU, the rules defined for the member states of this organisation can be considered relevant (Krymska *et al.*, 2024).

Virtual and augmented reality. The use of VR and AR to create interactive learning environments that allow students to immerse themselves in practical tasks. The use of VR and AR technologies to create interactive learning environments that allow students to immerse themselves in practical tasks and situations related to the search, evaluation and use of information. This contributes to more efficient learning and development of practical skills. *Blockchain.* The use of blockchain technologies to ensure transparency and security of educational processes, in particular in knowledge assessment and certification systems. This helps to build trust in the education system and ensure objectivity and transparency in assessing information literacy. *Internet of Things (IoT).* Integration of IoT into learning environments allows for the creation of smart classrooms where students can interact with various devices and systems to collect and analyse data. This contributes to the development of skills in working with large amounts of data and information systems.

International programmes and projects.

1. Partnerships between educational institutions. Cooperation between universities and schools from different countries allows for the exchange of experience and best practises in information literacy. This helps to spread successful methods and innovative approaches.

2. International conferences and seminars. Participation in international conferences and seminars on information literacy allows teachers and students to keep abreast of the latest trends and innovations in this field.

3. Grants and funding. Receiving grants and funding from international organisations such as UNESCO allows for the development and implementation of new information literacy methods and programmes.

To summarise, methodological approaches to the formation of information literacy of future primary school teachers using computer technologies include the integration of information technologies into the educational

process, the use of specialised programmes and online resources to improve information skills, as well as training in digital literacy and critical thinking when using Internet resources. These approaches contribute to the development of future teachers' competencies necessary for successful work in the modern information society.

CONCLUSIONS

Developing information literacy in future primary school teachers is a key task of modern education. This is due to the rapid development of information technology and its growing role in society. Primary school teachers should have not only knowledge and skills in the subjects they teach, but also be competent users of information technologies and be able to form IL in their students. This paper considers different methodological approaches to the formation of future primary school teachers' IL using computer-based learning technologies. The choice of a methodological approach to the formation of IL depends on the learning objectives, age and level of students' training, as well as on the material and technical support of the educational institution. It is important to note that none of these approaches is universal. In addition to the above, it is also important to use a variety of methods and forms of teaching, as well as to create conditions for active participation of students in the process of IL formation. Information literacy is a continuous process that requires constant attention and efforts on the part of teachers.

The use of computer-based learning technologies can significantly contribute to the formation of future primary school teachers' IL. Computer technologies allow to: create interactive and dynamic learning environments that make the learning process more interesting and exciting for students, which can stimulate their active participation; provide students with access to huge amounts of information, which allows students to explore different topics and form their own opinions; develop information retrieval and evaluation skills: computer technologies allow students to quickly and easily find information and critically evaluate it; teach students to use information to solve real-world problems: computer technologies allow students to create presentations, projects, websites, and other products that they can use to solve various problems. It is important that computer technologies are used not only to transfer knowledge and skills, but also to develop critical thinking, creativity and other important qualities of future primary school teachers. Further research on this issue is seen in the consideration of ways to form the information literacy of future primary school teachers using computer-based learning technologies.

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CONFLICT OF INTEREST

The authors have no potential conflict of interest that may affect the decision to publish this article.

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Методологічні підходи до формування інформаційної грамотності майбутніх учителів початкової школи за допомогою комп'ютерних технологій навчання

Анотація. В умовах сучасного цифрового світу, важливість інформаційної грамотності постає на перший план, особливо у сфері освіти. Забезпечення майбутніх вчителів початкової школи необхідними навичками у цій сфері має стратегічне значення для ефективності їхньої роботи та успішної адаптації до вимог сучасного освітнього простору. Дана стаття присвячена дослідженню методологічних підходів до формування інформаційної грамотності майбутніх учителів початкової школи з використанням комп'ютерних технологій навчання. Для дослідження формування інформаційної грамотності в майбутніх учителів початкової школи за допомогою комп'ютерних технологій навчання у статті використовувалися теоретичний аналіз, метод порівняння, синтез, метод моделювання та метод узагальнення. У статті розглянуто методологічні підходи до формування інформаційної грамотності майбутніх учителів початкової школи за допомогою комп'ютерних технологій навчання. Автори дослідження детально проаналізували сучасний стан питання і визначили основні принципи та методи, які мають бути використані для успішної реалізації даного процесу. В результаті дослідження були виявлені ключові аспекти, які необхідно враховувати при формуванні інформаційної грамотності у майбутніх педагогів, а також рекомендації щодо використання комп'ютерних технологій для досягнення цієї мети. Наголошується, що вибір методологічного підходу залежить від цілей навчання, віку та рівня підготовки студентів, а також від матеріально-технічного забезпечення навчального закладу. Підкреслюється важливість використання комп'ютерних технологій навчання для формування інформаційної грамотності, адже вони дозволяють створювати інтерактивні та динамічні навчальні середовища, надавати доступ до інформаційних ресурсів, розвивати навички пошуку та оцінювання інформації, а також навчати використовувати інформацію для вирішення реальних проблем. Автори статті роблять висновок, що формування інформаційної грамотності майбутніх учителів початкової школи – це комплексне завдання, яке потребує використання різноманітних методологічних підходів та комп'ютерних технологій навчання. Результати дослідження можуть бути корисними для науковців у галузі освіти, а також педагогів, які цікавляться питаннями інтеграції комп'ютерних технологій у навчальний процес.

Ключові слова: інноваційні підходи; інформаційна грамотність; компетенції; методи навчання; цифрове суспільство