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PEDAGOGICAL OPPORTUNITIES FOR DEVELOPING INFORMATION HANDLING COMPETENCE OF FUTURE PRIMARY SCHOOL TEACHERS IN A DIGITAL LEARNING ENVIRONMENT

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Annotation. *In the context of a digital educational environment, the development of information literacy competence among future primary school teachers is one of the most urgent pedagogical issues. The significant increase in information flows within the educational process intensifies the need for the systematic development of this competence. Therefore, a scientific analysis of pedagogical opportunities for its formation is of great importance.*

The study employed comparative analysis and the generalization of scientific literature. Based on the experience of the United States, Germany, and South Korea, approaches to the development of information literacy competence were examined and synthesized.

Keywords*: digital learning environment, information handling competence, pedagogical opportunities, information literacy, artificial intelligence, digital competence.*

Introduction. In the context of a digital educational environment, the development of information-handling competence in the process of training future primary school teachers is emerging as one of the pressing pedagogical issues. This is because the primary education stage is considered the main foundation for forming students' fundamental knowledge, skills, and competencies. Especially, developing this competence on the basis of an interdisciplinary approach and ensuring the effective use of digital platforms and artificial intelligence tools remains an urgent scientific and pedagogical issue.

In the context of the digital educational environment, the pedagogical possibilities for developing information handling competence in future primary school teachers are still among the issues that require additional scientific research.

The purpose of this article is to theoretically analyse the pedagogical possibilities for developing information handling competence in future primary school teachers within a digital educational environment and to develop scientifically grounded conclusions based on international experience.

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Methods. The study employed comparative pedagogical analysis and methods of synthesising scientific literature. On this basis, the specific features of developing information handling competence in the experience of different countries are identified, and the possibilities of integrating these features into the educational process are analysed.

Results. As a result of the study, a number of pedagogical possibilities for developing information handling competence in future primary school teachers within a digital educational environment were identified. These possibilities were shaped through an analysis of modern educational technologies, international experience and competence based approaches. In this study, pedagogical possibilities are interpreted as the totality of existing resources of the educational environment that serve to form and develop an individual's knowledge, skills and competences.

The effectiveness of developing information handling competence in future primary school teachers in a digital educational environment depends on the rational use of the pedagogical potential of this environment. Therefore, it is important, first of all, to identify and scientifically substantiate the possibilities of the digital educational environment that contribute to the formation of this competence. These possibilities are manifested through the availability of educational resources, the interactivity of the learning process and the integration of modern technologies, and they serve to activate students' activity in working with information.

These opportunities are manifested in the following structural directions. Access to information resources. This environment enables students to quickly use electronic libraries, scientific databases, educational platforms, and other digital sources. Such conditions support students' independent learning and research activities, directing them to search for, select, and analyze the necessary information. In addition, the process of comparing and evaluating information obtained from various sources has a positive impact on the development of information literacy. As a result, students acquire skills in selecting information, determining its reliability, and using it purposefully.

Opportunities for interactive teaching. The digital learning environment creates favorable conditions for organizing the educational process in forms based on collaboration and active communication. Such an environment strengthens interaction between teacher and student, as well as among learners themselves, thereby increasing the effectiveness of jointly acquiring and sharing knowledge. During interactive activities, students gain experience in collectively analyzing various information sources, discussing problem situations, exchanging opinions, and drawing evidence-based conclusions. Consequently, they develop skills in collaborative work, making group

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decisions, and comparatively evaluating different viewpoints.

Possibilities for developing independent learning activities. The digital learning environment expands the opportunities for organizing and managing students' independent learning activities. This environment provides the necessary pedagogical conditions for carrying out project work, individual assignments, and small scale research. In the process of independent activity, students acquire important practical skills such as searching, selecting, analyzing, comparing, and generalizing information. This, in turn, serves to strengthen their competencies in self development and lifelong learning.

Possibilities for using multimedia and visual information. The digital learning environment significantly broadens the opportunity to present learning materials through multimedia tools. Graphs, videos, animations, and interactive images make it easier to understand complex topics and increase the visual clarity of educational content. The use of visual tools helps students to perceive and retain learning information more deeply. Moreover, multimedia technologies stimulate learners' cognitive activity and enhance the effectiveness of receiving and processing information.

Opportunities of artificial intelligence technologies. As one of the innovative components of the digital educational environment, AI-based tools are creating new opportunities for developing information-handling competence. With the help of such technologies, students develop skills in quickly identifying information sources, filtering data, assessing the reliability of scholarly resources, and organizing bibliographic information. In addition, the prudent use of AI tools helps to uphold the principles of academic integrity and increase the effectiveness of academic activity. As a result, students gain experience in using modern digital resources in a purposeful, responsible, and efficient manner.

Discussion. The findings of the study show that the digital educational environment offers multifaceted pedagogical opportunities for developing prospective primary school teachers' competence in working with information. The identified opportunities—access to information resources, interactive teaching, independent learning activities, and the use of multimedia and artificial intelligence technologies—integrate with one another to elevate students' information-handling processes to a qualitatively new level.

In particular, broad and rapid access to information resources strengthens students' independent research activities and directs them towards selecting, comparing, and critically evaluating various sources. This situation is also observed in international practice, specifically in the ACRL Framework approach in the USA, where the development of critical thinking in the process of using information occupies a central place. Thus, the abundance of

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information in the digital environment makes the need to assess its quality even more urgent. The possibilities of interactive teaching, in harmony with the "Learning Library" approach used in Germany, serve to develop students' skills of collaborative learning and collective analysis of information. In such an environment, information is not only an individual source of knowledge, but is manifested as knowledge formed within processes of social interaction and communication.

The opportunity to develop independent learning activities forms students' competencies in self-regulation, choosing information-search strategies, and organizing research activities. This aspect is methodologically consistent with the stages of developing and synthesizing information-search strategies in the Big6 model. As a result, the student becomes not only a passive receiver of information, but an active subject who processes and transforms it.

The use of multimedia and visual information helps reduce cognitive load and facilitates the effective mastery of complex pedagogical concepts. At the same time, although visual materials allow information to be perceived more quickly, the need for their critical analysis remains. This, in turn, develops the competence of active interpretation of information rather than its passive reception.

The use of artificial intelligence technologies is emerging as one of the most promising directions of the modern digital educational environment. AI tools enable students to filter information, conduct rapid analysis and optimize the process of scientific inquiry. However, the most important aspect in applying these technologies is the development of skills to critically evaluate their outputs and verify their reliability. This is also recognized as an important pedagogical requirement in the experiences of Germany and South Korea.

Conclusion. Overall, the analysis shows that the digital educational environment is not merely a technical condition for developing information-handling competence, but rather a complex system that integrates pedagogical, methodological and cognitive opportunities. Therefore, to achieve effective results, these opportunities must be organized not separately, but as an interconnected system. From this perspective, the integrated use of the possibilities of the digital educational environment in the process of training future primary school teachers contributes to the stable and gradual development of their competence in working with information.

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