THE IMPORTANCE OF AN INTERDISCIPLINARY APPROACH IN THE TRAINING OF FUTURE COMPUTER SCIENCE TEACHERS FOR VOCATIONAL AND TECHNICAL EDUCATION INSTITUTIONS

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Abstract. The article is devoted to the study and analysis of an interdisciplinary approach in the process of training future teachers of the computer profile for vocational and technical education institutions. Considering the essence of this approach, the article focuses on the integration of various knowledge and skills from various fields, which allows for comprehensive training of future teachers. Special emphasis is placed on the importance of combining technical aspects of computer education with professional and pedagogical competencies. The key challenges and advantages of introducing an interdisciplinary approach into pedagogical practice are highlighted, particularly in the context of modern requirements for teaching and education.

Key words: interdisciplinary approach, computer technologies, future teacher of the computer profile, professional and technical education, integration of knowledge.

Statement of the problem. In the modern world, computer literacy and skills are becoming increasingly important in various fields, including vocational and technical education. Computer-profiled educators must possess both technical knowledge and pedagogical skills to effectively teach future computer-profiled educators for vocational and technical education institutions (VTEIs). An interdisciplinary approach in the training of these educators can offer numerous advantages but also presents certain challenges. The scientific problem addressed by this article is how to best implement an interdisciplinary approach in the preparation of future computer-profiled educators for vocational and technical education

institutions, what advantages it can provide, and what challenges may arise during this process.

Analysis of recent studies and publications. In recent years, the necessity of an interdisciplinary approach in the training of future computer-profiled educators for vocational and technical education institutions has become increasingly evident. Several studies conducted by Ukrainian researchers have explored the advantages and challenges of this approach. This article will analyze the results of these studies and examine the current state of interdisciplinary training for educators in Ukraine.

The problems of professional training of future teachers of the computer profile were dealt with by many scientists, in particular Alekseeva H., Antonenko O. [1], Horbatyuk R.M. [2], Kabak V.V. [3], Kovalenko O.E., Bryukhanova N.O., Melnychenko O.O. [4], Kruglyk V.S., Osadchiy V.V. [5], Lishchyna V. O. [7], Mazur I.-S. V. [9], Khomenko V. G. [11] and others. The analysis of the works showed the lack of acceptable technologies for the formation of the content of the disciplines of professional training of future teachers of the computer profile, which would take into account the specifics of the dynamic field of information and communication technologies (ICT) and an interdisciplinary approach. The research conducted by V. Kruglyk and V. Osadchy examines the issues of professional training for future programmers in the context of implementing an interdisciplinary approach. The study provides a description of the specifics of the future professional activities of programmers, using three types of professions based on the object of work ("human-technology," "human-symbolic system," "human-human"). The application of an interdisciplinary approach in the professional training of future programmers is considered as part of the process of shaping their professional competence through the implementation of connections with disciplines in the fields of humanities, socio-economic studies, mathematics, and natural sciences.

Despite attempts to implement an interdisciplinary approach in the training of future computer-profiled educators for vocational and technical education institutions, the current state of education preparation in Ukraine remains largely specialized. According to the report from the Ministry of Education and Science of

Ukraine, education programs for learners are focused on individual disciplines such as computer science or vocational and technical education, rather than integrating these disciplines. However, the report notes ongoing efforts in Ukraine to develop interdisciplinary training programs for educators.

Objectives of the article. The aim of this article is to explore the advantages and challenges of an interdisciplinary approach in the training of future computer-profiled educators for vocational and technical education institutions. This article seeks to provide an in-depth analysis of the benefits and issues associated with this approach and to offer recommendations for its effective implementation. By achieving these goals, the article aims to contribute to the ongoing discourse regarding the importance of an interdisciplinary approach in the preparation of future computer-profiled educators for vocational and technical education institutions. It also aims to provide ideas and recommendations for educators and institutions seeking to adopt this approach.

The main material of the research. Interdisciplinary education refers to an educational approach that integrates knowledge and skills from different disciplines or fields of study. In the context of vocational and technical education with a computer profile, interdisciplinary training involves combining technical knowledge of computer hardware, software, and programming with pedagogical skills for effective teaching of vocational and technical education learners.

The interdisciplinary approach in the preparation of future computer-profiled educators for vocational and technical education institutions (VTEIs) offers several advantages. Here are some of them:

Comprehensive Education: The interdisciplinary approach ensures a more comprehensive education that integrates technical knowledge of computer hardware, software, and programming with pedagogical skills for effective teaching in vocational and technical education. This helps educators develop a deep understanding of the needs and challenges their students face in both technical and pedagogical aspects.

Enhanced Teaching Strategies: Through the integration of technical and pedagogical knowledge, educators can better understand various learning styles of education learners and develop teaching strategies that align with their individual needs. This can lead to more effective teaching and improved learning outcomes for education learners.

Collaboration: The interdisciplinary approach fosters collaboration among different departments within an institution. This enables the exchange of ideas and the development of new approaches that can be beneficial for both educators and education learners. Collaboration can also lead to the creation of innovative technologies and teaching methods that enhance instruction and learning in this field.

Staying Informed about New Technologies: The interdisciplinary approach encourages educators to stay informed about new technologies and teaching methodologies, which is crucial in a field that is constantly evolving. This helps educators adapt to emerging technologies and teaching methods, providing future computer-profiled educators with the most current and effective instructions.

Professional Development: The interdisciplinary approach encourages ongoing professional development for educators – a commitment to lifelong learning. By staying informed about new technologies and teaching methodologies, educators can continuously refine their skills and knowledge, ultimately benefiting both the educators themselves and education learners.

Overall, the interdisciplinary approach in the preparation of future computer-profiled educators for vocational and technical education institutions (VTEIs) provides a more comprehensive education, improved teaching strategies, collaboration, promotes staying informed about new technologies, and encourages continuous professional development. These advantages ultimately benefit educators, education learners, and institutions alike.

While the interdisciplinary approach in the preparation of future computer-profiled educators for vocational and technical education institutions (VTEIs) offers

numerous advantages, there are also challenges and issues that may arise during its implementation. Here are some of them:

Resistance to Change: Some educators may resist change and prefer traditional teaching methods that focus solely on technical knowledge. This can complicate the implementation of the interdisciplinary approach, which requires a willingness to integrate various fields of study.

Lack of Resources: Implementing the interdisciplinary approach may require additional resources, such as materials and equipment, which may be unavailable. This can make it challenging to provide comprehensive education that combines both technical and pedagogical knowledge.

Integration of Different Disciplines: Integrating various fields of study requires a high level of collaboration and communication among educators, which can be challenging to achieve. It may be difficult to reconcile different teaching strategies and approaches, and educators may find it challenging to understand each other's perspectives and experiences.

Time Constraints: Integrating different fields of study may demand additional time and effort, which can be challenging to accommodate within the existing curriculum. Educators may struggle to balance technical content with pedagogical aspects, potentially leading to an unbalanced curriculum that does not adequately prepare education learners for their future profession.

Lack of Preparedness: Educators may lack the necessary training and professional development for the effective implementation of an interdisciplinary approach. They may not possess the skills or knowledge required to integrate various fields of study, leading to ineffective teaching and learning outcomes.

In summary, implementing an interdisciplinary approach in the preparation of future computer-profiled educators for vocational and technical education institutions can be challenging due to resistance to change, resource constraints, integration of different disciplines, time limitations, and the lack of proper educator preparation. To ensure the success of the interdisciplinary approach in professional

and technical education, it is crucial to address these challenges and problems through effective communication, collaboration, and professional development.

Implementing an interdisciplinary approach in the training of future computer science teachers for vocational and technical education institutions can be a difficult task, but there are several recommendations that educational institutions and educators can follow to effectively implement this approach:

Provision of adequate resources: Institutions should ensure that faculty have access to the necessary resources, such as materials and equipment, to implement an interdisciplinary approach effectively. This could include providing additional funding or partnering with industry to ensure educators have access to the latest technology.

Providing professional development: Institutions should provide ongoing professional development for faculty to help them develop the necessary skills and knowledge to effectively implement an interdisciplinary approach. This may include holding seminars, conferences, or online training courses to keep faculty up-to-date on the latest technology and teaching methods.

Foster collaboration: Institutions should foster a culture of collaboration among faculty to ensure effective integration of different fields of study. This may involve creating opportunities for faculty to work together, such as joint planning sessions or interdisciplinary teaching teams.

Creating a balanced curriculum: Institutions should create a curriculum that balances technical content with pedagogical content. This may involve integrating teaching courses into the curriculum or providing professional development to help teachers develop the necessary teaching skills.

Foster a culture of innovation: Institutions should foster a culture of innovation by encouraging faculty to experiment with new learning strategies and technologies. This may involve providing faculty with opportunities to attend conferences or participate in research projects to help them stay abreast of the latest innovations in the field.

Conclusions. In general, the implementation of an interdisciplinary approach in the training of future teachers of the computer profile for vocational and technical education institutions requires the concerted efforts of institutions and educators. By providing adequate resources, professional development, fostering collaboration, creating a balanced curriculum and fostering a culture of innovation, educational institutions and teachers can effectively implement an interdisciplinary approach and provide their learners with a well-rounded education that combines technical and pedagogical knowledge.

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