

THE COMPANY "DEL c.z." (CZECH REPUBLIC)  
NES NOVA DUBNICA sro (SLOVAK REPUBLIC)  
UNIVERSITY OF MALAYSIA PAHANG (MALAYSIA)  
UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO (MÉXICO)

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# STRATEGY OF THE QUALITY OF EDUCATION AND SCIENCE: RESEARCH PRIORITIES AND PERSPECTIVES

**MATERIALS**  
OF THE VI INTERNATIONAL RESEARCH  
AND PRACTICAL INTERNET CONFERENCE

July 08–10, 2025

Zdar nad Sazavou, 2025

**DEL c.z.**

**DEL c.z. Strojírenská 38, 591 01 Žďár nad Sázavou, CZECH REPUBLIC**

**Materials of the VI International Research and Practical Internet Conference "Strategy of the Quality of Education and Science: Research Priorities and Perspectives", - 2025.**

**ISBN 978-966-8796-37-7**

**Strategy of the Quality of Education and Science: Research Priorities and Perspectives** : Materials of the VI International Research and Practical Internet Conference (July 08-10, 2025) : collection of abstracts [for the general ed. Ph.D Serhii Onyshchenko]. Zdar nad Sazavou : "DEL c.z.", 2025. 19 p.

The collection includes materials of the VI International research and practical internet conference "Strategy of the quality of education and science: research priorities and perspectives". The materials of the collection will be useful for researchers, scientists, graduate students, researchers, teachers, students

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**PEDAGOGY AND PSYCHOLOGY**

**ELECTRONIC EDUCATIONAL RESOURCES - A COMPONENT OF THE  
TRAINING OF FUTURE ENGINEER-EDUCATORS OF ENERGY PROFILE**

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In the context of digitalization of the educational environment, the introduction of electronic educational resources (EER) in the training of future technical specialists is of particular importance. The energy sector, which is dynamically developing and requires highly qualified personnel, puts forward new requirements for engineering and pedagogical education, which necessitates the modernization of the educational process by integrating innovative teaching aids. The use of EER allows to increase the efficiency of learning material, activates independent activity of students and forms the digital competence of the future teacher.

The relevance of the topic is due to the need to optimize the educational process of energy engineering teachers using modern digital technologies and resources.

The issue of introducing electronic educational resources into higher technical education was considered in their works by O. Spivakovsky [6], Yu. Trius [9], M. Zhaldak [3], L. Lytvynova [4] and others. Researchers emphasize that the effective use of EER contributes to improving the quality of teaching, ensuring the individualization of the educational process, expanding the didactic capabilities of the teacher.

Modern training of future engineering teachers in the energy sector is impossible without the effective use of electronic educational resources, which ensure the implementation of the principles of accessibility, flexibility and interactivity of learning. According to research by domestic scientists, electronic educational resources must meet methodological, didactic and technical requirements, be integrated into academic disciplines, and take into account the specifics of technical training of specialists [1, 3]. Significant attention to this issue is paid by S. Onyshchenko, who emphasizes the need to use ICT competencies as the basis of professional activity of future teachers of engineering profile, especially in the conditions of digital transformation of education [5, 11, 12].

However, despite a significant number of works, the aspects of targeted use of EER in professional training of engineers-teachers of energy profile have not been sufficiently studied. The issue of adapting the content, structure and functionality of electronic resources to the specifics of professional activity in the field of energy and teaching technical disciplines remains open.

The purpose of the article is to substantiate the role and importance of electronic educational resources in the process of training future energy engineer teachers and to identify areas for their effective implementation in the educational process.

In the context of the digital transformation of education, electronic educational resources are not only a means of presenting educational information, but also an element of pedagogical influence that contributes to the formation of students' professional competencies. EER include: interactive textbooks, virtual laboratories, electronic simulators, video lectures, educational platforms (Moodle, Google Classroom, OpenEdX) and simulation software.

For the training of energy engineer teachers, the use of virtual laboratories and simulators that allow modeling physical and technical processes in a safe learning environment is especially relevant. For example, platforms such as Labster, Phet Simulations, EveryCircuit allow experiments to be conducted without real equipment [2; 10].

In addition, electronic resources contribute to the formation of key competencies, including digital, communicative, self-educational, and analytical. They provide:

- availability of educational content at any time;
- adaptability to the individual needs of the student;
- multi-channel perception of information (text, video, sound);
- the possibility of self-control of knowledge through tests, quizzes, etc.

At the stage of preparation for teaching, EER are also used to create their own educational products by students: multimedia presentations, interactive modules, electronic courses. This contributes to the development of methodological literacy of the future teacher of technical disciplines.

It is also worth emphasizing the need to form critical thinking in students regarding the use of digital resources: the ability to analyze their quality, pedagogical feasibility, source of origin, etc. [8]. It is in this context that an important role belongs to the teacher, who acts not only as a carrier of knowledge, but also as a moderator of the digital environment.

Thus, electronic educational resources are an integral part of the modern educational process in higher technical schools, especially in the training of energy-related engineering teachers. Their use contributes to the formation of professional and digital competencies, intensifies the learning process, and ensures practice-oriented training.

In the future, it is necessary to systematize existing EER according to professional disciplines, develop innovative interactive modules, and deepen research into their impact on the quality of training of future technical teachers.

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