THE IMPORTANCE OF DEVELOPING STUDENTS' TECHNOLOGICAL COMPETENCES IN DIGITAL EDUCATION

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ABSTRACT

This article talks about educational processes, problems and their pedagogical solutions aimed at developing students' technological competence in technological classrooms in a digital educational environment, thereby improving the quality of education.

KEYWORDS: Competence, innovation, technical creativity, organic communication, production, technology, method, skill, problem, quality, result.

INTRODUCTION

Digital technologies have become so deeply integrated into our lives that today it is impossible to imagine not only our daily activities but also the development of socio-economic sectors without them. Naturally, as in other fields, digital technologies are also bringing innovations into the field of education. In this century of advanced digital technologies, the most crucial factor is data. The importance of Big Data technology in collecting and analyzing data to draw conclusions is immense. It is often used for predictive analysis of significant amounts of data or other methods of extracting value from data. Today, one of the most promising directions in the formation of an innovative workforce in any country is the education system. Implementing the process of digital transformation brings about new challenges for the education system that can only be addressed with a comprehensive approach to digital transformation. The digital transformation of the education process is defined by the global processes of transitioning to a digital economy and digital society. The future prospects of these transitions will largely be determined by education. The concept of digital transformation in education has been developed by several authors. The term "digitalization" emerged in connection with the strengthening of information and communication technologies. Some scholars, such as D. Bell, D. Meadows, and P. Kuusi, consider this concept as the translation of information into digital form, while also viewing it as the infrastructural, managerial, behavioral, and cultural components of education. Today, the key components of the educational environment are undoubtedly of great importance in the development of electronic education systems and in the process of forming a digital information educational environment and integrating it into the overall education system. In forming a learner-centered educational environment, the creation of a digital information educational environment is considered a key factor. This is based on identifying an individual's personal abilities as a subject of knowledge and activity, which, in turn, acknowledges each person's right to choose their own path of development by exploring alternative forms of education.

The introduction of modern innovative teaching methods for students in general secondary schools is one of the essential conditions for Uzbekistan's economy to join the ranks of the world's leading industrial and technological powers within the next 10 years, meaning that by 2030, the country aims to become one of the leading nations in the world in terms of its industrial and technological sectors. In his Address to the Oliy Majlis, President of Uzbekistan Shavkat Mirziyoyev emphasized that in order to achieve progress, it is necessary and essential to master digital knowledge and modern information technologies. He noted that this will provide the opportunity to take the shortest path to success, stressing that, currently, enterprises are far from utilizing digital technologies. He also highlighted that digital technologies not only improve the quality of products and services but also reduce unnecessary expenses, increase efficiency, and, in short, can significantly improve people's lives.

The task of developing and implementing the "Digital Uzbekistan – 2030" program, which envisions updating all sectors of the economy based on digital technologies, was outlined. This, in turn, creates wider opportunities for modernizing the leading sectors of industry, strengthening competitiveness, introducing advanced technologies into the field, establishing high-tech enterprises, technoparks, production facilities, and building modern engineering and communication infrastructures.

The modern challenges of shaping technological competencies among school students are closely related to the insufficient material base for technology education and the inadequate organization of the connection between schools and production. This is one of the most pressing and critical issues that need to be resolved in the context of the digital economy and digital education. Pedagogical experiences indicate that students' practical training is currently carried out mainly in school workshops. The limited mechanization of production processes and the restricted material and technical resources lead to a shift in the focus of school students' labor and technological training. In practice, it has been shown that teaching in school workshops is often directed towards handicrafts and manual labor, which limits technological education and prevents the fulfillment of its goals and objectives.

Another important aspect is the focus on digitizing the sectors that most frequently interact with the population, prioritizing efforts to ease people's burdens. Practical processes have begun in digitizing healthcare, cadastre, social protection, agriculture, and education sectors, and positive results are expected soon.

Technological education, which modern school students must master, is an integrative body of knowledge aimed at studying the problems associated with technological changes and various approaches to improving everything that surrounds us. In this process, the question arises: what advantages does digital education offer for the technology subject?

The idea of technological education is embodied in the new technology subject, which focuses on students' technological training and their role in a technological society. The integration of production and the advancement of cutting-edge technologies require that each graduate, to be qualified in a specific profession or craft, must be able to carry out at least one technological process effectively. This, in turn, necessitates technological preparedness.

Technological training is the process of preparing students for practical activities based on shaping their perception of the technological landscape of the world. In our national pedagogy,

the project of technology education, and the development of technological competencies in students, has not been sufficiently studied, and scientific research in this area is almost non-existent. The lack of scientifically grounded approaches to defining the content of technological competencies and their application in the school curriculum further complicates the process. In this regard, the following advantages of digital education become evident:

- First and foremost, a comprehensive centralized database is established;
- Regular updates (UPDATE) can be easily maintained;
- Teachers and students can use their time more efficiently in school;
- Large-scale classrooms can be organized;
- The quality of education improves, enhancing the teacher's ability to monitor and manage classroom activities;
- Control becomes unified and centralized nationwide;
- Parents can integrate more closely with the education system at home, providing them with the opportunity to independently assess their child's progress.

Digital education encompasses digital classrooms, digital libraries, and digital homes. The concepts of a Digital Laboratory and Digital Workshop, which are crucial work objects for the technology subject, offer significant potential. Students can utilize digital workshops across various subjects, with the following benefits:

- Equipment-related issues are eliminated as everything is digitized;
- Safe, repeatable opportunities for practice are provided.

Considering the constantly changing modern conditions, the potential importance of technological competencies in the comprehensive development of students is a key factor in solving the issue. To effectively implement technological education in schools in line with current demands, it is essential to have a thorough understanding of the state of technological preparedness of students and its specific characteristics.

To join the ranks of developed countries, we must first take the shortest path to progress by mastering advanced modern information and communication, internet, and digital technologies. Due to our geographical location, we must cross at least two borders to access large seaports, which negatively impacts our position in the global market, both in terms of time and economic factors. The solution lies in intelligence, new innovations, and the potential of skilled personnel.

For Uzbekistan's future to be great, its education system must not only catch up with the modern world but also surpass it and leap into the future. Only then will future technologies be created within the framework of Uzbek education. As a result, the economy, politics, and society will thrive. Otherwise, we will continue to spend our lives adopting the technologies and knowledge created by others. To find our place in the world, we must make a leap toward the yet undiscovered knowledge of the future.

REFERENCES

1. Bell, D. (1973). The Coming of Post-Industrial Society: A Venture in Social Forecasting. Basic Books.
2. OECD (2019). OECD Future of Education and Skills 2030: Conceptual Learning Framework. OECD Publishing.
3. Prensky, M. (2001). Digital Natives, Digital Immigrants. On the Horizon, 9(5), 1–6.

4.   European Commission (2018). Digital Education Action Plan.

5.   Voogt, J., & Knezek, G. (Eds.). (2008). International Handbook of Information Technology in Primary and Secondary Education. Springer.

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