



PROBLEMS OF DEVELOPING TEACHERS’ DIGITAL COMPETENCE IN THE USE OF GLOBAL EDUCATIONAL TECHNOLOGIES IN PRIMARY EDUCATION

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Abstract

This article analyzes the challenges of developing teachers’ digital competence in the effective use of global educational technologies in primary education. In the modern educational process, a teacher’s digital literacy is considered a key factor. The article scientifically examines existing problems, their underlying causes, and possible solutions to address them.

Keywords: Digital competence, primary education, innovative technologies, pedagogical skills, digital literacy, quality of education.

Introduction

In the current era of globalization, the education system is undergoing fundamental changes. In particular, the introduction of innovative and digital technologies based on global experience in primary education is considered one of the most pressing tasks. In this process, the role of the teacher is becoming increasingly important, requiring not only the delivery of traditional knowledge but also the effective use of modern technologies. With the help of digital technologies, the learning process can be organized in an interactive, engaging, and effective way. However, the full utilization of these opportunities directly depends on the level of teachers’ digital competence.



Digital competence is the ability of a teacher to effectively use information and communication technologies, work in a digital environment, analyze data, and integrate it into the educational process.

Digital competence for primary school teachers includes the following aspects:

- the use of electronic resources;
- the application of interactive platforms;
- the organization of distance learning;
- conducting digital communication with students.

A teacher with developed digital competence organizes lessons in a modern way, increases students' interest, and improves the quality of education.

In the process of implementing global technologies in primary education, a number of challenges can be observed:

1. Lack of technical resources. In some schools, modern computers, internet access, or interactive whiteboards are insufficient. This limits the effective use of technologies.
2. Low level of teachers' preparedness. Many teachers do not have sufficient knowledge and skills in using digital tools. This problem is especially common among older teachers.
3. Lack of methodological materials. There is a shortage of sufficient methodological resources for adapting digital technologies to primary education.
4. Lack of motivation. Some teachers are not interested in learning new technologies or are afraid of using them. This slows down the innovation process.
5. Time constraints. Due to heavy workload, teachers do not have enough time for self-development and improving their digital skills.

To address the above-mentioned problems, the following proposals are put forward:

1. Improving the professional development system

Teachers should regularly participate in:

- training sessions;
- seminars;
- online courses.



2. Focusing on practical training

In addition to theoretical knowledge, teachers should gain hands-on experience working on real digital platforms.

3. Increasing motivation

Active teachers should be encouraged through certificates, awards, and competitions.

4. Strengthening technical infrastructure

Schools should be equipped with modern digital tools and stable internet access.

6. Creating self-development opportunities

Independent learning should be supported through online platforms, video lessons, and methodological resources.

International research shows that countries with higher levels of teacher digital competence achieve better educational outcomes, particularly in early education stages. For example, the integration of ICT in countries such as Finland, Singapore, and South Korea demonstrates that well-trained teachers are able to create more student-centered, interactive, and inclusive learning environments.

In primary education, digital tools such as interactive whiteboards, educational applications, and online learning platforms significantly enhance students' engagement and motivation. However, without sufficient teacher preparation, these tools may remain underutilized or used only at a basic level. Therefore, teacher training programs must shift from theoretical ICT knowledge to practical digital pedagogy. Another important aspect is the development of digital pedagogical content knowledge (TPACK), which combines subject knowledge, pedagogy, and technology. This approach helps teachers design more effective lessons that integrate digital tools with curriculum content.

Moreover, the development of digital competence should be considered a continuous process rather than a one-time training activity. Schools should create supportive environments where teachers can collaborate, share experiences, and learn from each other through professional learning communities.

Thus, the development of teachers' digital competence is a strategic priority in modern primary education. It requires coordinated efforts at the level of policy,



school administration, and individual teachers. Only through systematic training, motivation, and infrastructure development can digital technologies be effectively integrated into the educational process. Finally, ensuring equal access to digital infrastructure across urban and rural schools is essential to eliminate the digital divide. Without addressing these inequalities, the effectiveness of digital education reforms will remain limited.

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