INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE



ISSN: 2692-5206, Impact Factor: 12,23

American Academic publishers, volume 05, issue 05,2025



Journal: https://www.academicpublishers.org/journals/index.php/ijai

THE ROLE OF INFORMATION TECHNOLOGIES IN THE PROFESSIONAL DEVELOPMENT OF TEACHERS

M. K. Baymuradova

Asia International University, Master Student

Annotation: This article analyzes the importance of modern information technologies in the primary education system, especially their role in improving the professional competence of teachers. It also considers ways to enhance pedagogical activities, create an interactive learning environment, and boost the quality of education through the effective use of information and communication technologies.

Keywords:information technology, primary education, teacher, professional competence, digital skills, professional qualification.

Today, the demands put on the education system are increasing day by day. Particularly, the professional training, knowledge and skills of teachers working in primary education, and the level of mastery of modern technologies are crucial. At the same time, the use of information and communication technologies is an important tool in improving the professional competence of primary education teachers.

Professional competence is understood as a set of knowledge, skills and abilities necessary for a teacher to efficiently carry out his or her activities. The competence of a primary education teacher includes following parts:

- -didactic and methodological knowledge;
- -psychological and pedagogical preparation;
- -communication skills;
- ability to use ICT.

Professional competence is a combination of a teacher's theoretical knowledge, practical and pedagogical skills and the ability to use modern technologies. A primary education teacher should be professional in the following areas:

Pedagogical competence - understanding the content of education, lesson planning, class management;

Methodological competence - appropriate use of various methods and techniques;

Technological competence - using ICT tools in the educational process;

Communicative competence - effective communication with students, parents and colleagues.

Primary school students can use IT effectively in all subjects. Starting from the 2023-2024 academic year, primary school teachers began teaching the subject "Informatics and

INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE



ISSN: 2692-5206, Impact Factor: 12,23

American Academic publishers, volume 05, issue 05,2025

Journal: https://www.academicpublishers.org/journals/index.php/ijai



Information Technologies" from the first grade in general secondary schools. This has led to

an important increase in the professional competence of primary school teachers, aimed at developing the logical thinking of students. The use of interactive games in 1st grade computer science lessons is very effective. Students perform various practical tasks on computers. It is advisable to use various didactic materials for primary school students, using visual aids, practical exercises and interesting games.

Information technologies for primary education teachers serve the professional growth of teachers in the following areas:

- **-Free access to educational resources**: Increase of the opportunity to independently study methodological materials through electronic libraries and online platforms
- **-Distance learning and qualification**: Through online courses, teachers can work on themselves regardless of time and place.
- **-Organization of interactive lessons**: With the help of multimedia tools, students' interest in the lesson can be enhanced.
- **-The possibility of reflection and analysis**: It becomes easier to quickly analyze the results of the lesson through electronic journals and test systems.

It is advisable for primary education teachers to use the following ways to improve their professional competence:

- -Organize regular training in ICT: Introducing teachers to new programs based on practical exercises.
- -Maintain electronic portfolios: Digitizing teacher achievements, lesson plans, and project activities.
- **-Use virtual collaboration platforms**: Establishing an exchange of experience between teachers.
- -Participate in open online courses (MOOC, Coursera, EdX, etc.): Opportunity to gain best experience from around the world.

Most teachers face technical or methodological challenges in using information technologies. The main reasons for this are the lack of appropriate qualifications, limited technical devices, or poor motivation. To overcome such problems, the followings are recommended:

- -organizing practical seminars and trainings regularly;
- -improving technical equipments in schools;
- -popularizing the experience of advanced teachers;
- -creating special guides and methodologies on ICT.

INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE



ISSN: 2692-5206, Impact Factor: 12,23

American Academic publishers, volume 05, issue 05,2025

Journal: https://www.academicpublishers.org/journals/index.php/ijai



The development of the professional competence of a teacher in the modern educational process is one of the important tasks. The rational use of information technologies serves not only the teacher's work on himself, but also the high-quality organization of the educational process. That is why, it is necessary to establish a systematic approach to improving the ICT literacy of primary education teachers. The development of the professional competence of primary education teachers using information technologies is much more effective than traditional approaches. At the same time, the development of adapted ICT training programs for teachers, increasing their technological, methodological

References:

1. Resolution of the President of the Republic of Uzbekistan on the "Digital Education" Concept. (2023).

and reflective abilities allows us to improve the quality of education dramatically.

- 2. Karimova, D. (2020). Boshlang'ich ta'lim metodikasi [Primary education methodology]. Tashkent.
- 3. Sharipov, O. (2022). Axborot texnologiyalarining pedagogik faoliyatga integratsiyasi [Integration of information technologies into pedagogical activities].
- 4. UNESCO. (2021). ICT Competency Framework for Teachers. UNESCO.
- 5. Murodova, Z. R., & Juraeva, N. (2024). Works in the educational process of higher education. International Conference on Interdisciplinary Science, 1(3).
- 6. Murodova, Z. R., & Baymuradova, M. K. (2025). Boshlang'ich ta'lim o'qituvchilarining axborot texnologiyalari orqali kasbiy kompetentligini rivojlantirish [Developing professional competence of primary school teachers through information technologies]. Pedagogik Tadqiqotlar Jurnali, 2(2), 473-478.
- 7. Muradova, F., & Murodova, Z. R. (2023). Information technologies in teaching and education. European Journal of Innovation in Nonformal Education, 3(2), 41-46.
- 8. UNESCO. (2018). ICT Competency Framework for Teachers. UNESCO.
- 9. Ministry of Public Education of the Republic of Uzbekistan. (n.d.). www.edu.uz. Retrieved from www.edu.uz