



PEDAGOGICAL DESIGN IN DEVELOPING THE INFORMATION-CONSTRUCTIVE COMPETENCE OF FUTURE EDUCATORS

Olamova Mamura Umarovna

Senior Lecturer, Department of Social and Human Sciences, Tashkent Institute of Textile and Light Industry

Email: olamovamamura@gmail.com

Phone: +998 90 303 77 91

Abstract:

Today, the effective use of innovative technologies and pedagogical design methods at all levels of education, including preschool education, is of particular importance. This article analyzes the process of developing the information-constructive competence of future educators through pedagogical design technologies. It highlights ongoing reforms in the education system of the Republic of Uzbekistan, the introduction of digital technologies, and best practices aimed at improving the professional training of future educators. In addition, the article discusses pedagogical approaches focused on forming information-constructive competence, methodological recommendations, and ways to improve educational content.

Keywords: Pedagogical design, information-constructive competence, digital technologies, innovative education, preschool education, pedagogical methods.

Introduction

At present, the effective use of innovative approaches and information technologies in all stages of the education system, especially in preschool education, is gaining increasing importance. Modern educational reforms require future educators not only to acquire pedagogical knowledge and skills but also to develop their information-constructive competence. This competence includes the ability to integrate digital technologies into the teaching and learning process, carry out pedagogical design, and function effectively in a modern educational environment. **Pedagogical design** is a systematic activity aimed at planning, organizing, and evaluating the educational process. It plays a significant role in developing future



educators' independent thinking, their use of innovative technologies, and their ability to find effective solutions to pedagogical challenges. Therefore, developing information-constructive competence based on pedagogical design is considered one of the pressing scientific issues today.

In Uzbekistan, extensive reforms are being implemented in the field of education. Special attention is being paid to the modernization of the preschool education system, improving the quality of education, and enhancing the professional qualifications of educators. Developing the information-constructive competence of future educators is an essential part of these reforms, and it is being implemented through the integration of pedagogical design technologies into the educational process.

The preschool education system in Uzbekistan has undergone profound reforms in recent years, based on new principles. In this process, equipping future educators with skills to work with innovative technologies is of great importance. The following key documents and programs serve as the main criteria for the reforms being implemented in this direction: The *“Concept for the Development of the Preschool Education System until 2030”* (2019) outlines key objectives such as improving the quality and efficiency of preschool education, introducing advanced pedagogical technologies, and equipping educators with digital competencies.

Methods

Pedagogical technology is embodied in an educational curriculum that defines the content, methods, tools, and forms required for acquiring professional competence. The technology for developing information-constructive competence through pedagogical design in future educators includes the following components:

Figure 1. Technology for developing information-constructive competence based on pedagogical design.

This technology encompasses key elements essential for organizing the educational process in a comprehensive and effective manner. First, it includes the **content** necessary to develop knowledge, skills, and competencies related to information and constructive thinking. The **methods** aim to develop creative and analytical thinking, while the **tools** involve various technologies ranging from multimedia resources to interactive platforms. The **forms** include individual and group activities, as well as practical training. Each of these elements plays a crucial role



in forming information-constructive competence through pedagogical design and contributes to making the educational process innovative and effective.

Content: The content of the pedagogical technology includes the necessary knowledge, skills, and competencies required for future educators to acquire information and constructive competence. This entails the formation of skills essential for information exchange, problem-solving within the educational process, and functioning effectively in both academic and practical settings.

Methods: To ensure effective learning, various pedagogical methods are used, including project-based learning, problem-oriented approaches, and assessment methods. These methods are aimed at developing the creative, analytical, and critical thinking skills of future educators.

Tools: The tools used in the educational process—such as multimedia materials, interactive platforms, and educational software—support the development of information-constructive competence by facilitating the delivery of educational content and supporting student engagement.

Forms: The forms of educational activities include individual and group work, practical exercises, and reflective analysis. These enable future educators to actively participate in the learning process and apply their knowledge in practice. Pedagogical technology ensures a **comprehensive and systematic approach** to developing the information-constructive competence of future educators. This integrative approach allows them to fully cover all aspects of the educational process, helping them to deeply internalize knowledge, skills, and abilities. It also enhances their readiness for professional activity and increases the efficiency of education. Such an approach, combining theoretical and practical aspects of education, ensures the holistic development of information and constructive competence and contributes to future educators' success in pedagogical activities. In the next part, I can translate the **table section** and the rest of the document in the same scientific style. Do you want me to continue with that?



Description of Skill Levels and Process Technology Table 1

Training Conditions	Description	Example: Future Educator
1. Characteristics of a specific field and description of the expected (planned) level of qualification	This requirement defines clear qualification levels in the educational curriculum and determines the corresponding characteristics and competencies.	As a future educator, qualifications include the development of children's essential social skills, pedagogical diagnostics, and individualized approaches. Expected qualification levels involve solving pedagogical problems, organizing educational sessions, and addressing the individual needs of children.
2. Process technology, including the sequence of presenting tasks in the pedagogical process	This requirement specifies how the learning process should be organized and how pedagogical tasks should be presented in a sequential manner. It also includes the development of technologies for various types and levels of learning situations.	In the educational process, the educator should present pedagogical tasks to children in a logical sequence — for example, starting with the explanation of a new topic, followed by practical exercises, and concluding with assessment. For different learning contexts: organizing individual, group, and whole-class activities.

This table clearly outlines the levels of qualification and process technology, helping to understand the conditions required within the educational process. It illustrates how to effectively apply pedagogical technologies for educators, how to develop their professional competencies, and which approaches can be implemented in the teaching process.

DISCUSSION

Today, numerous measures are being developed and implemented in our country to enhance human capital and workforce capacity. While education is one core aspect of higher education institutions, the other is upbringing, with science serving as its foundation. Issues without scientific grounding cannot be effectively resolved. Therefore, increasing the scientific potential of higher education institutions and



applying scientific achievements in practice through innovation remains a pressing concern.

Workforce potential is defined by the total number of labor resources and their gender, age, education, professional skills, and involvement in various sectors of enterprises and social production. As a component of society's labor potential, workforce capacity plays a vital role.

To develop the information-constructive competence of future educators, various approaches are used: **systematic**, **learner-centered**, and **activity-based** approaches. In our study, we found that some rules and methods based on the competency-based approach are highly appropriate:

The Concept of Education Informatization;

The Concept of Educational Development;

The Concept of Forming the Personality as a Professional.

These approaches are important in developing and applying technologies that foster information-constructive competence in the preschool education process.

Researchers studying pedagogical competence emphasize that it is determined by a person's professional characteristics. **N.V. Kuzmina** considers the sociocultural component of professional competence to be a key element in the formation and development of pedagogical competencies.

The theory of creating modern educational materials based on information technologies belongs to a new field of science—**pedagogical design**—which is integrative in nature. It intersects with disciplines such as design, pedagogy, ergonomics, and informatics. The main area of study in pedagogical design is the development of educational materials that enhance the effectiveness of the pedagogical process.

In the monograph by **U.Sh. Begimkulov, R.Kh. Djuraev, R.G. Isyanov, Sh.S. Sharipov, Sh.M. Adashboev, and M.N. Tsoy**, a **three-tiered model of information-constructive competence** is proposed.

RESULTS

Analyzing the features of integrating modern information technologies into preschool education highlights the need for continuous technological advancement, the informatization of social life, and the use of modern methods of working with



information. This approach serves as the organizational foundation for the educational process in higher education institutions, ensuring that graduates are not only qualified specialists in ICT but also competitive professionals in their field. Furthermore, they will be capable of training future educators equipped with information-constructive competence.

In our view, **competence** is not just a set of knowledge but the ability to apply that knowledge effectively in real-world contexts. Competence encompasses the skills, experience, and problem-solving abilities necessary for successful professional activity. Its development requires **lifelong learning**, accumulating experience, and acquiring new skills. Focusing on competence formation in the education system ensures both professional and personal development.

We believe that “**professional competence**” is the student’s ability to turn their specialty into a tool for personal growth. This type of competence includes essential knowledge, skills, and abilities relevant to their field. The ways in which students acquire these elements are closely tied to the social-psychological and methodological aspects of the educational process.

In our analysis, we actively used the following terms: *competence*, *competency-based approach*, *competences*, *competencies*, *core competencies*, *competent specialist*, and *professional competence*. Although these terms are diverse, our study focuses mainly on the concepts of “**competence**” and “**information-constructive competence**”, in accordance with the objectives of our research.

Uzbekistan’s modern higher education system is in the phase of reform. It emphasizes establishing a **continuous education system**, preparing professionally competent specialists as a result of higher education, and training qualified personnel who meet both regional and international standards and possess practical skills for efficient performance.

The relevance of the **competency-based approach** lies in its role as a **learner-centered social strategy** in education, aimed at enabling individuals to make autonomous and humanistic choices. It prioritizes **renewing educational content** to align with evolving educational goals, fostering self-determination, self-awareness, social integration, and individuality.

The competency-based approach shifts focus to **learning outcomes**, where success is not measured by the amount of knowledge acquired but by the ability to act effectively in various situations. The outcomes defined by **state educational**



standards (SES) are reflected in the competencies acquired by graduates—i.e., their ability to apply knowledge, skills, and personal attributes appropriately within their professional roles. As a result, graduates must possess a comprehensive set of necessary competencies.

CONCLUSION

Within the framework of educational reforms in Uzbekistan, significant progress is being made in forming the **information-constructive competence** of future educators through pedagogical design. These technologies not only enhance future educators' professional qualifications but also develop their innovative thinking, effective use of information resources, and ability to independently develop educational projects.

According to the research findings, the following approaches play a crucial role in developing educators' information-constructive competence through pedagogical design technologies:

Enhancing interactivity in the educational process by integrating **information and communication technologies** into the preschool education system.

Incorporating **pedagogical design methods** into teacher training systems to foster independent and creative activity.

Developing future educators' **digital competence** through the use of online learning platforms and interactive multimedia tools.

Promoting the principle of **“learning through activity”** in educator training systems, thereby establishing a framework for continuous professional development.

In the future, further improving pedagogical design technologies, deeply integrating them into pedagogical practice, and merging them with modern digital technologies will serve to significantly increase the **efficiency and quality** of the educational process.

References

O‘zbekiston Respublikasi qonun va qarorlari:

1. O‘zbekiston Respublikasi Prezidenti “Maktabgacha ta’lim tizimini 2030 yilgacha rivojlantirish konsepsiyasi”, 2019-yil.



2. O‘zbekiston Respublikasi Prezidentining “Maktabgacha ta’lim tizimini tubdan takomillashtirish chora-tadbirlari to‘g‘risida”gi PF-5198-sonli Farmoni, 2017-yil 9-sentabr.
3. O‘zbekiston Respublikasi “Maktabgacha va maktab ta’limi to‘g‘risida”gi Qonuni, 2022-yil 20-oktyabr.
4. O‘zbekiston Respublikasi Oliy ta’lim, fan va innovatsiyalar vazirligi “Raqamli ta’lim konsepsiyasi”, 2021-yil.
5. O‘zbekiston Respublikasi Vazirlar Mahkamasi "Maktabgacha ta’lim tizimini rivojlantirish bo‘yicha 2023-2025 yillarga mo‘ljallangan davlat dasturi", 2023-yil.

Ilmiy va nazariy adabiyotlar:

6. Begimkulov U., Djuraev R.X., Isyanov R.G., Sharipov Sh.S., Adashboev Sh.M., Tsoy M.N. "Axborot-konstruktiv kompetentsiya: nazariya va amaliyot" – Toshkent, 2021.
7. Kuzmina N.V. “Pedagogik kompetentlikni shakllantirishning ijtimoiy-madaniy asoslari” – Moskva, 2018.
8. Vygotsky L.S. "Pedagogika va bola rivojlanishi" – Moskva, 1986.
9. Kulyutkin Y.N. “Pedagogik innovatsiyalar va ta’lim texnologiyalari” – Sankt-Peterburg, 2017.
10. Tixonov A.N. "Raqamli pedagogika: o‘qitish metodlari va texnologiyalari" – Moskva, 2020.
11. Olamova M.U. “Ilg ‘or kommunikatsion texnologiyalar asosida bo‘lajak tarbiyachilarning axborot-konstruktiv kompetensiyalarini takomillashtirish” Журнал-Академические исследования в современной науке., Страницы-167-171., 2024/6/6.
12. MU Olamova “Talabalarning axborot va konstruktiv kompetensiyasining loyixalash imkoniyatlari” - Inter education & global study, 315-323b, 2024