

THE PEDAGOGICAL SIGNIFICANCE OF USING INNOVATIVE TECHNOLOGIES IN HIGHER EDUCATION INSTITUTIONS

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Abstract: This article is dedicated to studying the pedagogical significance of integrating information and communication technologies (ICT) and innovative pedagogical methods in the higher education process. The research analyzes the classification of modern pedagogical software tools, their didactic capabilities, and their role in developing students' independent learning abilities. The effectiveness of using interactive tools such as "Plickers" is also examined. The article substantiates the necessity of innovative approaches in training higher education specialists.

Keywords: Innovative technology, pedagogical process, pedagogical software tools, information and communication technologies, interactive methods, Plickers.

Introduction. Alongside the rapid development of all spheres of modern society, the higher education system is also facing new demands and challenges. The traditional "teacher-centered" educational model is insufficient for meeting the needs of contemporary students and preparing them for a dynamic and information-rich world. Therefore, the introduction of innovative technologies in education has become not only a promising direction but also an urgent pedagogical necessity.

Innovative pedagogy encompasses not only the use of new technical tools (computers, projectors, interactive whiteboards) but also approaches that fundamentally transform the content, methods, and forms of education. The purpose of this article is to conduct a comparative analysis of the pedagogical significance of innovative technologies used in higher education versus traditional methods, to study their effectiveness, and to identify new requirements for teaching activities.

Methods. The methodological foundation of the research comprises systemic, student-centered, and activity-based approaches. The following research methods were employed in the article:

1. *Theoretical Analysis:* Studying scientific literature, teaching manuals, and articles in the fields of pedagogy, psychology, and educational technologies.
2. *Classification and Systematization:* Grouping innovative technologies and pedagogical software tools based on their didactic functions and role in the educational process.
3. *Comparative Analysis:* Comparing the advantages and disadvantages of traditional and innovative teaching methods.

During the research process, the functional capabilities and pedagogical application methods of modern educational programs, including the "Plickers" application, were studied.

Results and Discussion.

1. *Distinctive Features of Innovative Education and the Teacher's Role:*

Innovative approaches in higher education are characterized by the following key features:

- ❖ *Forecasting and Design:* Education involves not only acquiring existing knowledge but also preparing students to foresee future problems, model them, and design solutions.
- ❖ *Collaboration and Team Decision-Making:* The educational process is aimed at developing students' ability to collaborate, discuss, and collectively make important decisions.

❖ *Activity and Interactivity:* Interactive methods (discussions, projects, workshops, role-playing games) that ensure students' active participation in the learning process are of paramount importance.

This fundamentally changes the teacher's role. The modern teacher transforms from merely a knowledge provider into a consultant, moderator, project supervisor, and organizer of the learning process. They are required to continuously update their knowledge and learn new pedagogical technologies and ICT tools.

2. Classification of Pedagogical Software Tools and Their Didactic Significance:

Pedagogical Software Tools (PST) are specialized software products created for the purpose of individualizing the educational process and increasing its efficiency and visual appeal.

3. The "Plickers" Program as an Innovative Assessment Technology:

"Plickers" is a free interactive application managed via a smartphone or tablet, allowing students to respond using special QR-coded cards. Its significance in higher education is manifested in the following:

- *Immediate Feedback:* The teacher receives students' responses to a question posed during a lesson within seconds and can instantly analyze their level of understanding.
- *Applicability in Any Group:* As long as the teacher has a smartphone and internet, a quick poll can be conducted at any stage of the lesson.
- *Anonymity and Participation:* Each student can keep their answer hidden, which also activates shy students as they are assured their answers will not be revealed in front of the entire audience.
- *Time-saving:* The time spent on traditional oral or written surveys is significantly reduced.

Discussion. The conducted analysis shows that the introduction of innovative technologies requires not only enriching technical equipment but also changing the philosophical approach to the entire pedagogical process. The main obstacles can be cited as teachers' conservatism towards new developments, insufficient qualifications, and in some cases, limited financial resources.

However, the positive outcomes of overcoming these obstacles are clear and significant. Innovative technologies serve to improve the quality of education, increase students' cognitive interest, and develop their critical thinking, creativity, and teamwork abilities. Simple yet effective tools like "Plickers" can be an excellent starting point for this process.

Conclusion. In conclusion, it should be emphasized that the use of innovative technologies, particularly pedagogical software tools and ICT, in higher education institutions is a demand of the times. This is not only a means of increasing educational efficiency but also a key factor in shaping future specialists—individuals who are independent, creative, capable of teamwork, and prepared for lifelong learning.

For successful integration, the following measures are necessary:

1. Continuous professional development and encouragement of teachers in modern pedagogical technologies and ICT.
2. Development of methodological manuals for introducing various interactive software tools into the educational process.
3. Constant updating and development of the material-technical base and information infrastructure of higher education institutions.

Only through a harmonious synthesis of traditional and innovative approaches can a modern, competitive higher education system be created and the intellectual potential of society strengthened.

References:

1. Mirziyoyev Sh.M. Buyuk kelajagimizni mard va oliyjanob halqimiz bilan birga quramiz. "O'zbekiston" 2017.

2. Xudayberdiyeva M.K. Bo'lajak o'qituvchilarning raqamli kompetensiyalarini rivojlantirishning nazariy asoslari. – Toshkent: TDPU, 2021.
3. Sodiqova N.N. Raqamli pedagogika: nazariy va amaliy asoslar. – Toshkent: Fan va texnologiya, 2022. – 160 b.
4. Xayitov J.X. Bo'lajak texnologiya fani o'qituvchilarida kreativlik qobiliyatlarini rivojlantirish texnologiyasi // Ilm sarchashmalari. – Urganch, 3/2022. –B. 78-81. (13.00.00: №31).
5. Xayitov J.X. Texnologik ta'lim praktikumi darslarida talabalarning kreativlik sifatlarini rivojlantirish tamoyillari va kreativlik sifatlarining tavsifi // Respublika janubida elektr energetika sohasining rivojlanish istiqbollari. Mavzusida xalqaro ilmiy-texnik anjuman. Termiz, 2022. -B. 389-392.
6. Shomirzayev M.X. Education is personally focused technology //European Journal of Research and Reflection in Educational Sciences Vol. – 2020. – T. 8. – №. 8.
7. Shomirzayev M.X. et al. National handicrafts of Uzbekistan and its social-economic significance //European Journal of Research and Reflection in Educational Sciences. – 2020. – T. 8. – №. 8. – C. 129-138.
8. Shomirzayev M.X., Yuldashov K. K. The Educational Importance of Teaching Knowledge to Secondary School Students //CURRENT RESEARCH JOURNAL OF PEDAGOGICS. – 2021. – T. 2. – №. 08. – C. 132-142.
9. Shomirzayev M.X. Practical lessons in technology: Characteristics of organization and conduct //Asian Journal of Multidimensional Research. – 2021. – T. 10. – №. 4. – C. 991-1001.
10. Shomirzayev M.X. The concept of pedagogical technology and basic principles //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – T. 10. – №. 11. – C. 1551-1560