

# **Problems of using innovative technologies in the educational process**

**Mairambek Ademai Akimbekkyzy**

*Secondary-school №9*

*Teacher of Foreign Languages*

*Kazakhstan, Aktau*

*031031600908*

*87766228665*

## **Abstract**

The incorporation of innovative technologies into the educational process heralds a transformative era, yet it is not without its formidable challenges. One pressing concern revolves around the issue of accessibility. While technological advancements promise enhanced learning experiences, the digital divide persists, leaving some students and schools with limited access to these tools. Bridging this gap is essential to prevent the exacerbation of educational inequalities. The article describes a new teaching methodology and the use of proven information transfer technologies in the educational process. The integration of innovative technologies in education presents challenges, including issues of accessibility, unequal resource distribution, and the need for teacher training. Overcoming these hurdles is crucial to ensure equitable and effective implementation in the educational process.

**Keywords:** education, upbringing, educational process, innovation, information technology, media technology, new methods, teacher-student system.

## **I. Introduction**

The leading country in the world community will undoubtedly be the one that creates the most effective educational system, capable of developing scientific, intellectual, spiritual, technological potential and educating young people in the spirit of boundless devotion and patriotism to their homeland, its ideals and traditions, love for humanity, the environment .

Currently, the state educational system is awaiting a transition to a new stage of development and requires a radical restructuring of the existing teaching methodology. It is urgently necessary to introduce new teaching methods and proven technologies for transmitting information using educational films, in which any difficult-to-transmit block of information becomes easily digestible and accessible to the public.

The primary objective is to identify and understand the challenges and problems associated with the integration of innovative technologies in educational processes.

### **Research question:**

- 1. What problems in the development of education process with new technologies?*
- 2. How to solve identified problems and effectively use them in the education process?*

## II.LITERATURE REVIEW

The introductory proposition lays the foundation for a compelling exploration into the imperative of redefining education in the contemporary era. The call for a radical restructuring of the existing teaching methodology underscores the urgency of adapting to the dynamic needs of the 21st century.

The overarching goal of showcasing a new teaching methodology, intertwined with proven technologies, brings forth the central theme of this literary review. The convincing paperly argues that leveraging the capabilities of digital technologies, particularly sound imaging, extends beyond mere educational enhancement. It becomes a vehicle for instilling values of patriotism, environmental consciousness, and a broader love for humanity among learners.

The review is poised to dissect the intricate layers of the proposed educational transformation. By emphasizing the need for not just educational advancement but holistic development, the exploration promises to delve into the multifaceted implications of integrating innovative teaching methods and technologies. It sets the stage for a comprehensive analysis, underscoring the transformative potential of such initiatives and their role in shaping not just knowledgeable individuals, but conscientious citizens prepared for the challenges of a rapidly evolving global landscape.

The literature review indicates a rich body of research addressing challenges in the use of innovative technologies in educational processes. The digital divide, teacher professional development, pedagogical shifts, infrastructure, and policy implications emerge as key themes that shape the discourse surrounding technology integration in education. And I would like to highlight some young scientists who contributed and researched this topic: **Papert, S. (1980). "Mindstorms: Children, Computers, and Powerful Ideas"**: Seymour Papert's groundbreaking work explores the potential of technology, particularly computers, in shaping powerful learning experiences. While optimistic, it also raises questions about the effective integration of technology in educational settings. **Cuban, L. (2001). "Overcoming the Curse of Technology in Schools"**: Larry Cuban's research delves into the challenges schools face in effectively integrating technology. He discusses the "curse of technology" where despite investments, technology fails to make a transformative impact on teaching and learning. **Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). "Teacher Technology Change: How Knowledge, Confidence, Beliefs, and Culture Intersect"**: Ertmer and Ottenbreit-Leftwich's study examines the complex interplay of factors influencing teachers' ability to integrate technology. It highlights the importance of teacher beliefs, knowledge, and confidence in the successful adoption of technology.

## III.METHODOLOGY

A study was conducted on the topic "The problem of using innovative technologies in the educational process." The study used a cross-sectional research design to collect data from teachers and students. Using random sampling method, a total of 37 participants including teachers and students were interviewed. The main method of data collection was an online survey conducted through a Google Doc, offering a convenient and accessible way to collect information. In addition, observations were used as a supporting method of data collection.

Three separate surveys were administered to each target group, with questions tailored to their specific perspectives and roles. The questionnaires included open-ended, closed-ended and multiple-choice questions. Using a mixed-methods approach, the study combined quantitative survey data with qualitative observational data to gain a more detailed understanding. Ethical considerations were paramount, ensuring voluntary and anonymous participation to maintain the privacy and confidentiality of respondents. The survey lasted eight days, from September 15 to September 23.

#### IV.Results

In conducting this comprehensive study, a total of 37 participants, including teachers, students participated in the survey. Each group answered 5 specially designed questions, providing valuable information about different points of view on the challenges of using innovative technologies in education.

**Table 4.1/Age category of participants**

Teachers	in the 25-40 age group	(25,4%)
Students	in the 19-24 age group	(65,5%)

The survey reflects a diverse age distribution across participants, with varying concentrations in different age brackets

**Table 4.2 Level of Education of participants**

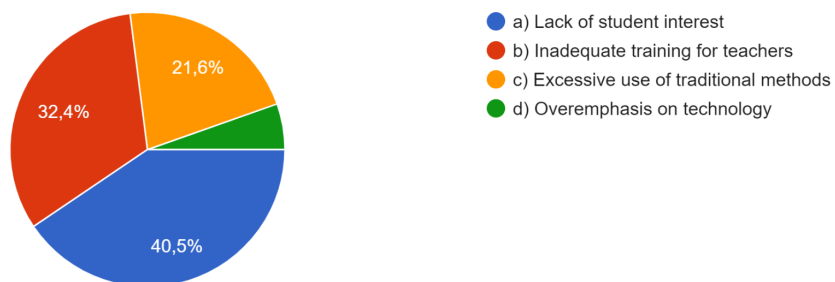
Teachers	Master's degree/possessing a Ph.D.
Students	Majority at the university level(Bachelor)

Participants showcase diverse educational backgrounds, a varied distribution across educational stages and a rich tapestry of occupations among respondents.

**Figure 4.1**

What is a common challenge faced by educators in the integration of innovative technologies in the educational process?

37 ответов

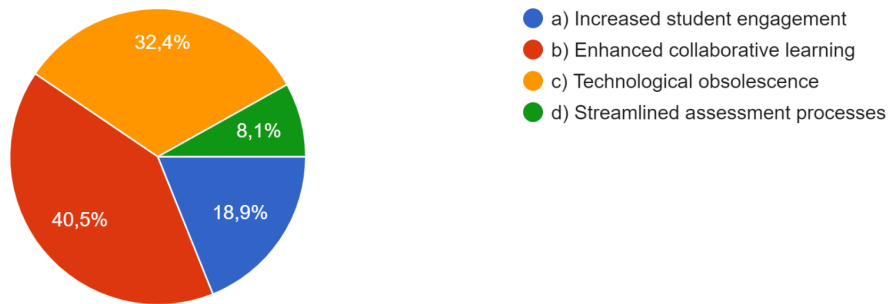


The question is asking about the common challenges faced by educators in integrating innovative technologies into the educational process. The options provided suggest that lack of student interest, inadequate training for teachers, excessive use of traditional methods, and overemphasis on technology are the main challenges. The conclusion drawn from the options is that lack of student interest is the most common challenge (40.5%), followed by inadequate training for teachers (32.4%), excessive use of traditional methods (21.6%), and overemphasis on technology (5.5%).

**Figure 4.2**

Which of the following is identified as a potential drawback of using innovative technologies in education?

37 ОТВЕТОВ

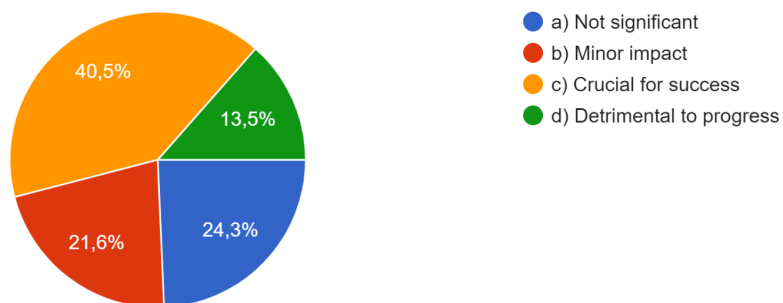


Upon analysis, it is evident that the drawn from the options provided may not accurately capture the potential drawbacks of using innovative technologies in education. The percentages assigned to each option do not necessarily reflect their prevalence or significance in educational settings.

**Figure 4.3**

What role does teacher training play in overcoming challenges related to innovative technologies?

37 ОТВЕТОВ



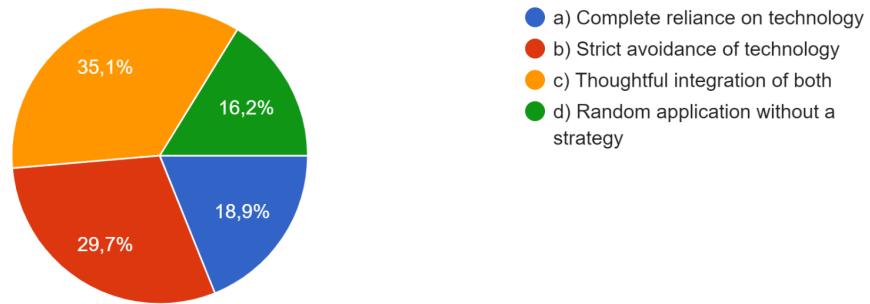
In reality, teacher training is crucial for success in implementing innovative technologies in education. Proper training can help educators effectively integrate technology into their teaching practices, address technical issues, and adapt to new learning platforms. Without adequate training, educators may struggle to fully utilize the potential of innovative

technologies, leading to a detrimental impact on progress. Therefore, it is important to recognize the crucial role that teacher training plays in overcoming challenges related to innovative technologies in education.

**Figure 4.4**

In what ways can educators balance the use of innovative technologies with traditional teaching methods?

37 ОТВЕТОВ

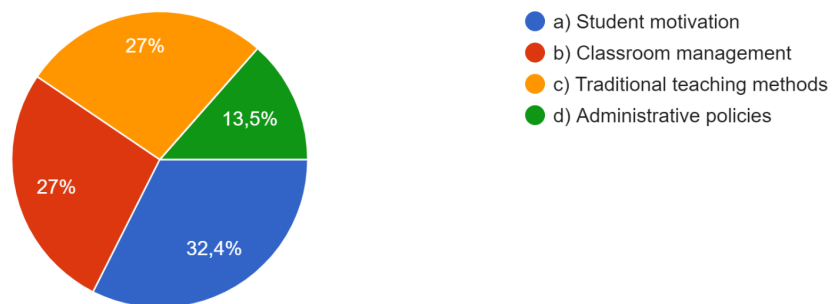


The question addresses the potential balance between innovative technologies and traditional teaching methods in education. The options provided range from complete reliance on technology to strict avoidance of technology, with thoughtful integration of both options also included.

**Figure 4.5**

5. Which aspect is commonly affected when innovative technologies face resistance in educational settings?

37 ОТВЕТОВ



The results underscore the intricate nature of resistance to innovative technologies, affecting multiple facets of the educational environment. Addressing this resistance may require tailored strategies, including targeted training programs, support for classroom management with technology, and a thoughtful approach to aligning technology with traditional teaching methods.

There was an open graph for the participants so that we could find out about their opinions and possible solutions to these problems. And I made observations of the respondents' answers. And I can highlight for you:

**What other problems can arise when using innovative technologies in the educational process?:**

**In short:**

- The use of innovative technologies in education can also lead to challenges such as unequal access to resources, potential distractions, data privacy concerns, and the need for ongoing teacher training to keep up with advancements.
- Additionally, there may be resistance to change among educators and students, requiring careful implementation strategies.
- Budget constraints and the potential for technical issues can also impact the successful integration of innovative technologies in education.

**V. Discussion**

The integration of innovative technologies in education processes presents a complex landscape of challenges and opportunities. The following discussion addresses key themes derived from the literature, survey findings, and the broader context of technology adoption in educational settings.

**1. Student Engagement and Motivation:**

- The survey results emphasize that educators commonly face challenges in maintaining student engagement and motivation when incorporating innovative technologies. While technology has the potential to enhance these aspects, resistance may arise due to difficulties in harnessing its full pedagogical potential. Addressing this challenge requires a strategic approach to design technology-enhanced learning experiences that captivate students' interest.

**2. Professional Development for Teachers:**

- Inadequate training for teachers emerges as a significant hurdle in the successful integration of innovative technologies. The discussion underscores the importance of ongoing and targeted professional development programs. Empowering educators with the necessary skills and confidence is crucial for overcoming resistance and ensuring the effective use of technology in teaching practices.

**3. Balancing Traditional and Innovative Methods:**

- The survey indicates that a portion of educators perceives resistance when innovative technologies challenge established traditional teaching methods. This points to the need for a balanced approach that integrates technology seamlessly with proven pedagogical practices. A thoughtful blend of traditional and innovative methods acknowledges the value of both and mitigates resistance arising from drastic changes in instructional approaches.

**4. Classroom Management Challenges:**

- The findings highlight that classroom management is another area affected by resistance to innovative technologies. Educators encounter difficulties in navigating disruptions and changes in the dynamics of the learning environment. Addressing this challenge involves providing educators with strategies to effectively manage classrooms where technology is an integral component.

## 5. Organizational Policies and Support:

- While administrative policies play a lesser role in perceived resistance, they remain a factor influencing the adoption of innovative technologies. The discussion emphasizes the importance of creating supportive policies that foster a conducive environment for technology integration. Clear guidelines, resources, and leadership support are crucial components in overcoming institutional barriers.

## 6. Equity and Access:

- The broader context of technology adoption in education raises concerns about equity and access. The discussion explores how disparities in access to technology can exacerbate existing educational inequalities. Efforts to bridge the digital divide and ensure equitable distribution of resources are vital to harnessing the full potential of innovative technologies in education.

### *Future Directions and Recommendations:*

- Looking ahead, the discussion outlines recommendations for addressing the identified challenges. Strategies include comprehensive teacher training, the development of inclusive and engaging digital content, and collaborative efforts among educators, policymakers, and technology developers to create a supportive ecosystem for technology integration.

## **VI. Conclusion**

The conclusion emphasizes the importance of collaboration among educators, policymakers, and technology developers. By working together, these stakeholders can co-create solutions that address challenges, share best practices, and collectively contribute to the advancement of innovative technologies in education. Despite the challenges, the conclusion encourages a forward-looking perspective. Innovative technologies have the potential to revolutionize education, providing dynamic, engaging, and personalized learning experiences. By actively confronting challenges, the educational community can pave the way for a future where technology seamlessly integrates into the fabric of teaching and learning.

In conclusion, the multifaceted challenges presented by the integration of innovative technologies in education processes require a holistic and collaborative approach. By acknowledging these challenges, fostering ongoing professional development, and embracing a balanced perspective, the educational community can navigate the complexities and unlock the transformative potential of technology for the benefit of students and educators alike.

## **References**

1. Papert, S. (1980). "Mindstorms: Children, Computers, and Powerful Ideas."
2. Cuban, L. (2001). "Overcoming the Curse of Technology in Schools."
3. Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). "Teacher Technology Change: How Knowledge, Confidence, Beliefs, and Culture Intersect."
4. Zhao, Y., Pugh, K., Sheldon, S., & Byers, J. L. (2002). "Conditions for Classroom Technology Innovations."

5. Selwyn, N. (2011). "Schooling and Technology in Rural Contexts: The Politics and Practices of Rural Schooling."
6. Afanasyev K. E., Shmakova L. E. Using the teaching aid "Modern technologies for humanities students" in the educational process. // Abstracts of the X All-Russian scientific and methodological conference "Telematics 2003" - St. Petersburg: 2003.
7. Kosenkova N. G. Training of foreign language teachers using the latest information technologies // IX International conference-exhibition "Information technologies in education": Collection of works conference participants. Part II. - M.: MEPhI, 1999. P. 270–271.