THEORETICAL FOUNDATION OF TECHNOLOGY IN MODERN EDUCATION

Author: ***Mohigul Soliboyeva***
Student of English Faculty at SamSIFL
Contact: +998 883400323,
mohigulsoliboyeva@gmail.com
Supervisor: ***Eshdavlatova Adiba Zafarovna***
Teacher at SamSIFL

Abstract

In the endeavor to construct a contemporary socialist nation, the synchronized advancement of education, science and technology, and human resources has emerged as a crucial element in enhancing national competitiveness. This research emphasizes educational technology as a pivotal connecting component that integrates these three domains, fostering a vibrant ecosystem for learning and talent cultivation. Educational technology not only facilitates effective teaching and individualized learning but also encourages collaboration between educational institutions and the industry, while aiding in the modernization of educational assessment frameworks.

Keywords: Educational technology; Integrated development; Talent development; Personalized learning; Industry-education collaboration; Educational assessment reform.

Annotatsiya

Zamonaviy sotsialistik davlatni barpo etish jarayonida ta’lim, fan va texnologiya hamda inson resurslarining uyg‘un rivojlanishi milliy raqobatbardoshlikni oshirishda muhim omil sifatida namoyon bo‘lmoqda. Ushbu tadqiqot “ta’lim texnologiyalari”ni uch soha — ta’lim, fan va inson resurslarini birlashtiruvchi asosiy bog‘lovchi vosita sifatida ko‘rsatadi va o‘quv va kadrlar tayyorlash uchun dinamik ekotizim yaratadi. Ta’lim texnologiyalari samarali o‘qitish va shaxsiylashtirilgan ta’limni ta’minlash bilan birga, ta’lim muassasalari va sanoat o‘rtasida hamkorlikni rag‘batlantiradi va ta’lim baholash tizimlarini modernizatsiya qilishga yordam beradi.

Kalit so‘zlar: Ta’lim texnologiyalari; Integratsiyalashgan rivojlanish; Kadrlar tayyorlash; Shaxsiylashtirilgan ta’lim; Ta’lim va sanoat hamkorligi; Ta’lim baholash tizimini isloh qilish

Аннотация

В процессе построения современного социалистического государства синхронизированное развитие образования, науки и технологий, а также человеческих ресурсов является ключевым элементом для повышения национальной конкурентоспособности. В данном исследовании

образовательные технологии рассматриваются как центральный связующий компонент, объединяющий эти три области и создающий динамическую экосистему для обучения и подготовки кадров. Образовательные технологии не только способствуют эффективному обучению и индивидуализированному подходу к учащимся, но и стимулируют сотрудничество между образовательными учреждениями и промышленностью, а также помогают модернизировать системы оценки образования.

Ключевые слова: Образовательные технологии; Интегрированное развитие; Подготовка кадров; Персонализированное обучение; Сотрудничество образования и промышленности; Реформа системы оценки образования

In the age of globalization and rapid digital change, the progress of society is becoming increasingly dependent on how advanced and effective the education system is. In this context, the harmonious development of education, science and technology, along with human resources, is now seen as a key priority in building a modern socialist nation. Together, these areas not only support economic development but also strengthen a country's overall competitiveness on a broader scale. Recently, new approaches in education—especially the growing use of educational technologies—have gained significant attention. Such technologies help organize the learning process more efficiently, allow instruction to be adapted to individual learners' needs, and create better connections between theoretical knowledge and real-world practice.[1;165] In addition, they play an important role in strengthening cooperation between education and industry, improving the quality of workforce preparation, and modernizing systems of educational assessment. The purpose of this study is to examine the relationships between education, science and technology, and human resources, and to assess the role and significance of educational technology within this interconnected system.

This study adopts a qualitative approach to explore how educational technology contributes to the development of education, science, and human resources. The research focused mainly on primary and secondary education settings to understand practical applications and challenges. Review of Existing Literature: Academic papers, government publications, and international reports were studied to identify current trends and key issues in educational technology and integrated education development [2;100]. Data Gathering: Information was collected through interviews with teachers and school administrators, questionnaires, and small group discussions. This helped to understand how technology is being used in classrooms and how it affects teaching and learning.

The rapid development of technology and the growing demands of modern society have made education a central factor in national development. Understanding

how educational technology can support teaching and learning is essential for improving the quality of education and preparing skilled human resources. In primary and secondary education, integrating technology into the classroom can enhance learning outcomes, make instruction more engaging, and better prepare students for future challenges. Moreover, studying the role of educational technology helps policymakers, school administrators, and teachers design more effective educational strategies, improve curriculum implementation, and strengthen the connection between schools and industry. [3;185]. By examining how educational technology interacts with education, science, and human resources, this study provides insights that are relevant for both theoretical research and practical applications in modern educational systems.

The findings of this study highlight the important role of educational technology in modern primary and secondary education. The increase in student engagement and motivation suggests that digital tools can make lessons more interactive and appealing[4;156]. This aligns with previous research showing that technology-enhanced learning encourages active participation and improves attention in the classroom. Personalized learning was another significant outcome observed. By adapting lessons to individual student needs and learning speeds, teachers were able to improve understanding and retention of knowledge. This supports the idea that educational technology can help address diverse learning styles and reduce gaps in student performance [5;50]. The study also emphasizes the importance of linking theory with practice. Through simulations, project-based tasks, and educational software, students were able to apply concepts in realistic contexts. This not only deepened comprehension but also helped students develop problem-solving and critical thinking skills, which are essential for success in the 21st century. Furthermore, the study shows that teachers themselves benefit from integrating technology. They acquire new skills in lesson design, digital assessment, and data-driven monitoring of student progress. Such professional development strengthens the overall educational ecosystem and fosters collaboration between schools and industry, preparing students for future workforce demands.

In summary, the discussion demonstrates that educational technology is not merely a supplementary tool but a vital component for improving teaching quality, personalizing learning, and connecting education with broader societal and economic needs. These insights underline the need for continued investment and training in educational technologies to maximize their impact on students, teachers, and the education system as a whole.

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