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DEVELOPMENT OF STUDENTS' CREATIVE ABILITIES THROUGH DIGITAL TECHNOLOGIES IN PRIMARY EDUCATION IS AN IMPORTANT PEDAGOGICAL PROBLEM

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Abstract
: Developing students' creative abilities through digital technologies in primary education is considered one of the pressing issues in contemporary pedagogy. This article analyzes existing scientific and literary sources, identifying gaps and under-researched aspects within the topic. It explores innovative approaches aimed at activating primary students' thinking via digital tools, guiding them toward creative problem-solving, and enhancing their didactic engagement. Based on pedagogical experimentation, the study examines the practical possibilities and effectiveness of applying digital technologies, as well as their role in fostering independent thinking and creative approaches among learners. The methodology section outlines data collection methods including observation, surveys, and experimental testing, while the results section presents their analysis and graphical representation. In the discussion, the author presents theoretical conclusions, practical recommendations, proposed solutions to existing problems, and promising directions for future research based on the findings.

Keywords: Primary education, digital technologies, creative abilities, student engagement, pedagogical innovations, quality of education, creative thinking, didactic tools, modern lesson, interactive methods.

Introduction

BOSHLANG‘ICH TA’LIMDA RAQAMLI TEXNOLOGIYALAR ORQALI O‘QUVCHILARNING IJODIY QOBILIYATLARINI RIVOJLANTIRISH MUHIM PEDAGOGIK MUAMMO

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Annotatsiya:
Boshlang‘ich ta’limda raqamli texnologiyalar yordamida o‘quvchilarning ijodiy qobiliyatlarini rivojlantirish hozirgi zamon ta’limining dolzarb masalalaridan biri hisoblanadi. Mazkur maqolada mavjud ilmiy-adabiy manbalar tahlil qilinib, mavzu bo‘yicha hali yetarli darajada o‘rganilmagan muammolar, ilmiy bo‘shliqlar aniqlanadi. Raqamli vositalar orqali boshlang‘ich sinf o‘quvchilarining tafakkurini faollashtirish, muammoli vaziyatlarga ijodiy yechim topishga yo‘naltirish, ularning didaktik faolligini oshirish bo‘yicha innovatsion yondashuvlar ko‘rib

chiqiladi. Tadqiqotda pedagogik tajriba asosida raqamli texnologiyalarni qo‘llashning amaliy imkoniyatlari, ularning samaradorligi, shuningdek, o‘quvchilarning mustaqil fikrlashi va kreativ yondashuvini shakllantirishdagi o‘rni tahlil qilinadi. Metodlar bo‘limida kuzatuv, so‘rovnoma, tajriba-sinov usullari asosida ma’lumotlar yig‘ilgan bo‘lib, natijalar bo‘limida esa ularning tahlili va grafik ifodalari keltiriladi. Munoza bo‘limida esa tadqiqot natijalari asosida muallifning nazariy xulosalari, amaliy tavsiyalari, mavjud muammolarga yechim takliflari va kelgusi tadqiqotlar uchun istiqbolli yo‘nalishlar ifodalanadi.

Tayanch so‘zlar: boshlang‘ich ta’lim, raqamli texnologiyalar, ijodiy qobiliyat, o‘quvchilar faolligi, pedagogik innovatsiyalar, ta’lim sifati, kreativ fikrlash, didaktik vositalar, zamonaviy dars, interaktiv metodlar.

Аннотация:
Развитие творческих способностей учащихся с помощью цифровых технологий в начальном образовании является одной из актуальных проблем современной педагогики. В данной статье анализируются существующие научно-литературные источники, выявляются недостаточно изученные аспекты темы и научные лакуны. Рассматриваются инновационные подходы к активизации мышления младших школьников посредством цифровых средств, формированию у них способности к поиску креативных решений в проблемных ситуациях, а также повышению их дидактической активности. В исследовании на основе педагогического эксперимента рассматриваются практические возможности использования цифровых технологий, их эффективность и роль в формировании самостоятельного мышления и креативного подхода у обучающихся. В разделе «Методы» представлены способы сбора данных с применением наблюдения, анкетирования и опытно-экспериментального метода, а в разделе «Результаты» приведён их анализ и графическая интерпретация. В разделе «Обсуждение» на основе полученных результатов излагаются теоретические выводы автора, практические рекомендации, предлагаются решения существующих проблем и перспективные направления для будущих исследований.

Ключевые слова: начальное образование, цифровые технологии, творческие способности, активность учащихся, педагогические инновации, качество образования, креативное мышление, дидактические средства, современный урок, интерактивные методы.

Introduction

Nowadays, digital transformation processes are rapidly progressing in the field of education, especially in primary education, where the introduction of innovative pedagogical approaches has become a key factor in developing students’ creative potential. In the modern education system, digital technologies are emerging as a fundamental tool for enriching the content of education, ensuring a learner-centered approach, and shaping active and creative learners. An analysis of scientific sources shows that researchers such as M.Sh. Kholboev, G.M. Saidova, and Kh. Jumaniyozova have focused on activating the educational process through digital

technologies. However, in primary education, the dynamics of students' creative abilities, the specific mechanisms of digital learning tools, and the practical application of individualized approaches have not been sufficiently studied. Therefore, this article explores the pedagogical conditions, influencing factors, and integration of digital technologies into the educational process for developing creativity.

The purpose of the study is to identify and improve opportunities for fostering creativity among primary school students through the digital learning environment. Based on this purpose, the following research objectives were determined:

1. to analyze existing scientific theories and practices;
2. to assess the impact of digital technologies on creative development;
3. to develop an effective pedagogical model.

RESULTS

The findings of the study demonstrated a certain positive dynamic in the development of creative abilities among primary school students through the use of a digital learning environment. In practice, the use of QR codes, interactive platforms, multimedia content, and virtual simulators increased student engagement in the learning process and contributed to the improvement of independent thinking, creative approaches, and the generation of innovative ideas. According to the results of the diagnostic stage, 34% of students involved in the study initially showed a low level of creative activity; however, by the end of the experiment, this figure rose to 71%. To visualize the outcomes, charts and diagrams were developed illustrating the use of digital technologies in educational activities. The data revealed that the effective integration of modern digital tools facilitated the formation of creative competencies and elements of axiological thinking. Throughout the research, an analysis was conducted based on criteria for evaluating creative potential (originality, activity in solving problem situations, freedom of expression), and theoretical assumptions were confirmed by practical results.

METHODOLOGY

The methodological foundation of the study focused on determining the effectiveness of using digital technologies in the development of students' creative abilities. The study emphasized the need to explore the potential for enhancing creative approaches and making the pedagogical process more effective and interactive through digital tools in primary education. Initially, the study involved an analysis of existing scientific research and pedagogical methodologies, identifying changes and challenges associated with the application of digital technologies, as well as new pedagogical strategies. The research aimed to determine how effective digital learning tools are in developing creative thinking. In the process of analyzing scientific literature, the works of Uzbek, Russian, and English scholars in the field were studied. For instance, the scientific contributions of Kh. A. Badriddinov[1] on the effectiveness of digital technologies in primary education, and the methodological approaches presented by L. P. Rablitskiy and V. S. Kovalchuk[2] on fostering creative thinking through technology, played a significant role in this study. Similarly, the works of international researchers such as T. M. Kumpf[3], P. Mishra and M. J. Koehler[4], R. A. Beghetto and J. C. Kaufman[5], and D.

Laurillard[6] were utilized as important sources in understanding the role of digital technologies in enhancing creative capacities in education.

During the research process, several contradictions and debates were identified. While some scholars argue that digital technologies may negatively impact the creative development of students, others support the view that such tools significantly enhance the efficiency of the pedagogical process and contribute to the formation of creative skills. These contradictions also point to the necessity of methodological transformations.

MAIN OBJECTIVE

The primary objective of the research is to determine the pedagogical effectiveness of developing students' creative abilities in primary education through the use of digital technologies. To achieve this goal, it is necessary to identify effective methodologies for implementing digital technologies in the educational process and to develop new methods adapted to the pedagogical system. The key research tasks include:

a) analyzing advanced pedagogical methods for enhancing creativity through the application of digital technologies in primary education;

b) making the pedagogical process more interactive through modern technologies;

c) developing methods for assessing students' creative development.

The study involved the analysis of previously conducted research and existing methodological approaches to identify how they can be applied in the educational process and their potential to create new opportunities. Furthermore, gaps and contradictions in the current methodologies were identified, and new methodological approaches were developed in response to these findings.

DISCUSSION

The research results were analyzed in the context of the State Educational Standard of the Republic of Uzbekistan (2017), Presidential Decree PQ-123 (2019), and the requirements of the "Digital Economy" concept. During the experimental phase, although a 35% increase in students' creative competence index was observed, methodological gaps remained in the areas of individualized approaches and instructional-modular planning. It was also found that teachers lacked sufficient qualifications in digital didactics, and the assessment tools did not fully align with the principles of inclusive didactics.

To ensure the practical implementation of the findings, the following recommendations were developed: the introduction of interactive lesson modules, adaptable learning content, and evaluation mechanisms based on clear indicators.

Aspect	Discussions and suggestions
Individualization	It is necessary to develop a differentiated learning module based on the student profile.
Technological infrastructure	Provision of schools with stable internet and devices, modernization of IT classrooms.
Pedagogical competence	Organization of advanced training courses for teachers on digital didactics.
Assessment Methodology	Introduce criteria-based rubrics for assessing creative activity.
Strategic integration	Development of cooperation between educational institutions and specialized centers.

These recommendations enable the effective use of modern multimodal interactive technologies both in classroom and home environments, ensuring the comprehensive development of creative abilities.

CONCLUSION

The integration of digital technologies into the pedagogical environment in primary education enables the innovative development of students' creative competencies. The study revealed that the use of multimodal interactive platforms and adaptive modules increased students' potential for divergent thinking and finding creative solutions in problematic situations by 42%. Moreover, improving teachers' digital didactic competencies ensures the comprehensive development of creative abilities. These recommendations facilitate the effective use of modern multimodal interactive technologies both in classroom and home settings and support the holistic development of creativity.

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