METHODS OF USING ARTIFICIAL INTELLIGENCE IN FOSTERING READING CULTURE AMONG PRIMARY SCHOOL STUDENTS

Xayitova Firuza Abdullayevna
Termiz Institute of Economics and Service Acting Associate Professor of the Department of Preschool and Primary Education, PhD in Pedagogical Sciences

Abstract: *This article highlights effective methods of utilizing artificial intelligence technologies in the process of developing a reading culture among primary school students. The study examines the role of AI-based interactive learning programs, text-to-speech systems, automated analysis, and recommendation platforms in enhancing students' interest in reading and developing independent thinking skills. It also explores AI-supported techniques for monitoring reading speed, comprehension level, and retelling abilities. Furthermore, the article presents methodological recommendations for integrating AI technologies into primary education as an innovative approach to improving reading culture.*

Keywords: *primary school, reading culture, artificial intelligence, interactive learning, educational programs, reading skills, digital technologies, innovative methods.*

In the modern educational landscape, fostering a strong reading culture among students is one of the most important components in developing their intellectual, moral, and aesthetic growth. The primary school stage is a particularly critical period, as it is during these formative years that children begin to cultivate essential skills such as enjoying the act of reading, understanding and analyzing texts, and expressing independent thoughts. At this stage, the role of the teacher is not only to teach reading techniques but also to instill a lifelong interest in reading as a meaningful and enjoyable activity.

The rapid advancement of digital technologies, especially Artificial Intelligence (AI), has opened up new possibilities for improving the quality of education. AI-powered interactive learning platforms, text-to-speech systems, personalized learning programs, and automated assessment tools have created opportunities to make the process of developing reading culture more engaging and efficient. Such technologies can adapt to the learner's individual pace, provide immediate feedback, and recommend appropriate reading materials based on the student's level, interests, and progress.

In the context of primary education, the integration of AI into reading instruction offers several benefits. It can help increase students' motivation by transforming reading into an interactive and game-like process, assist in developing reading fluency and comprehension skills, and provide teachers with data-driven insights into each student's

strengths and weaknesses. Furthermore, AI tools can support differentiated learning approaches, ensuring that each child receives tailored guidance and resources according to their needs.

Given these possibilities, this study aims to examine the methods of using artificial intelligence in fostering reading culture among primary school students. The research explores the theoretical foundations of reading culture, the potential of AI in educational settings, and practical strategies for implementing AI-driven solutions in primary classrooms. The ultimate goal is to present an innovative, effective, and student-centered approach to reading instruction that aligns with the demands of the 21st-century learning environment.

The concept of *reading culture* in primary education has been extensively discussed in pedagogical and psychological research. According to Guthrie & Wigfield (2000), reading culture refers not only to the ability to decode written symbols but also to the development of intrinsic motivation, comprehension skills, and a lifelong habit of reading. In the early stages of schooling, fostering reading culture is crucial because it lays the foundation for future academic success, critical thinking, and personal development.

Researchers such as Krashen (2004) have emphasized that exposure to engaging, age-appropriate reading materials, combined with positive reinforcement, significantly improves children's literacy skills. Additionally, Snow, Burns, and Griffin (1998) highlight that reading culture is strengthened when learners are provided with opportunities to interact with texts both inside and outside the classroom, with guidance from educators and caregivers.

The integration of technology in reading instruction has gained increasing attention in recent decades. Warschauer & Liaw (2011) argue that digital tools can enhance reading motivation through multimedia elements, interactive exercises, and immediate feedback mechanisms. However, while traditional digital resources improve engagement, the emergence of *Artificial Intelligence (AI)* in education has introduced more personalized and adaptive possibilities.

AI in education, as described by Holmes, Bialik, and Fadel (2019), offers adaptive learning environments where algorithms analyze student performance in real-time, adjusting the complexity and content of reading materials accordingly. AI-powered text-to-speech systems, such as those developed by Kurzweil Education, assist early readers and those with reading difficulties by providing auditory support, thus bridging comprehension gaps. Likewise, natural language processing (NLP) tools enable automatic assessment of reading fluency, vocabulary use, and comprehension, offering teachers actionable insights without adding to their workload.

Several studies (Luckin et al., 2016; Chen et al., 2020) have shown that AI-assisted reading programs can significantly improve both reading speed and comprehension levels in young learners. For example, AI-enabled platforms like Raz-Kids and Reading Coach use gamified approaches to encourage consistent practice while simultaneously collecting data on students' progress. These platforms also allow differentiated instruction, catering to the needs of advanced readers and struggling learners alike.

Despite its benefits, scholars also caution about the potential challenges of integrating AI into reading instruction. Selwyn (2019) warns of over-reliance on technology, stressing the importance of maintaining the human element in teaching—particularly in developing empathy, creativity, and deeper critical thinking skills. Thus, most literature suggests a blended approach, where AI serves as a supportive tool rather than a replacement for traditional pedagogical methods.

Overall, the existing body of research demonstrates that AI has the potential to transform reading culture development in primary education by making the process more individualized, interactive, and data-driven. However, its successful implementation requires thoughtful integration into curriculum design, teacher training, and careful consideration of ethical and accessibility issues.

The findings from the literature and practical applications indicate that integrating Artificial Intelligence (AI) into the process of developing reading culture among primary school students presents both significant opportunities and notable challenges. AI technologies, when thoughtfully implemented, can fundamentally enhance how reading is taught, practiced, and assessed. However, their effectiveness depends largely on pedagogical design, teacher readiness, and the degree of alignment between technological tools and the developmental needs of young learners.

One of the most promising advantages of AI is its capacity for personalization. Unlike traditional teaching methods, which often follow a standardized pace and structure, AI systems can adapt reading tasks to the learner's individual abilities, interests, and progress. For example, adaptive reading platforms can automatically adjust the complexity of vocabulary, sentence structure, and text length to match the student's current level. This targeted approach prevents both boredom in advanced readers and frustration in struggling learners, thus fostering a more sustainable reading habit.

Another benefit is the real-time feedback mechanism provided by AI. Immediate corrective feedback—whether on pronunciation, comprehension, or vocabulary usage—supports the learning process more effectively than delayed evaluation. For instance, speech recognition technologies can detect mispronunciations and suggest corrections instantly, while comprehension-check questions embedded in AI systems can highlight areas where the learner needs more practice. This constant feedback loop accelerates the acquisition of reading skills and deepens understanding.

Gamification elements within AI platforms also contribute to increased student engagement. When reading activities are presented as interactive games, learners are more likely to participate actively and consistently. Points, badges, and level-up systems appeal to children's natural sense of achievement and competition, turning reading into an enjoyable activity rather than a compulsory task. As supported by the research of Luckin et al. (2016), such motivation-driven approaches can significantly improve both reading frequency and quality.

Nevertheless, the integration of AI into reading culture development is not without limitations. Over-reliance on technology could potentially reduce the richness of human interaction in the learning process. Reading is not merely a mechanical skill but also a social and cultural activity that benefits from teacher guidance, peer collaboration, and emotional connection to stories. Therefore, AI should be positioned as a complement to, rather than a replacement for, traditional teaching methods.

Accessibility and equity also pose challenges. Not all schools and families have the technological infrastructure or financial resources to implement AI-based reading programs. Moreover, there is the risk of creating a digital divide where students from resource-rich environments gain significantly more benefits than those from under-resourced contexts. Addressing these disparities requires policy-level interventions, investment in digital infrastructure, and inclusive software design that ensures usability across diverse socio-economic settings.

Finally, ethical considerations must be taken into account. AI systems collect large amounts of data on student performance, raising concerns about privacy and data security. Clear guidelines on how this data is stored, used, and protected are essential to maintain trust between educators, parents, and technology providers.

In conclusion, while AI holds great potential to revolutionize the process of cultivating reading culture in primary education, its implementation must be deliberate, balanced, and inclusive. The most effective approach will likely be a blended model—combining AI's adaptive capabilities and engagement tools with the human touch of skilled educators. This synergy can ensure that children not only become proficient readers but also develop a genuine love for reading that will last a lifetime.

Foydalanilgan adabiyotlar

1. Ziyaqulova M. S. Q., Xayitova F. A. Savod o'rgatish darslarida o'quvchilarning kreativ qobiliyatini shakllantirishda rasmlarning o'rni //Academic research in educational sciences. – 2021. – T. 2. – №. 7. – C. 7-12.

2. Хайитова Ф. А. и др. Технологии креативного подхода к развитию речи младших школьников //Инновации в науке, обществе, образовании. – 2021. – С. 130-149.

3. Хаитова Ф. А. Maktabda o'quvchilarning o'qish madaniyatini shakllantirishning samarali usullari //Инновации в педагогике и психологии. – 2021. – Т. 4. – №. 6.

4. Хайитова Ф. А. Игра как практика развития на начальном этапе обучения //Гуманитарный трактат. – 2018. – №. 25. – С. 114-116.

5. Khaitova F. A. CREATIVE APPROACH TO FORMING A CULTURE OF LEARNING IN PRIMARY EDUCATION //Theoretical aspects in the formation of pedagogical sciences. – 2023. – Т. 2. – №. 5. – С. 123-127.

6. Hayitova F. Kitobxonlik madaniyatini shakllantirishda sinfdan tashqari ishlarning o'rni //Евразийский журнал академических исследований. – 2022. – Т. 2. – №. 8. – С. 235-242.

7. Хайитова Ф. А., Хуррамов Х. М. У. Значение национальных ценностей в воспитании молодежи //Вопросы науки и образования. – 2019. – №. 1 (42). – С. 88-95.

8. Abdullaevna H. F., Menglimamat P. J. The importance of forming a reading culture in the process of extracurricular activities //European Journal of Research and Reflection in Educational Sciences Vol. – 2019. – Т. 7. – №. 12.

9. Norov I. A SYSTEMATIC STUDY OF THE VOCABULARY OF THE LANGUAGE //Fan va Tadqiqot Samaralari. – 2024. – Т. 1. – №. 1. – С. 23-26.

10. Хайитова Ф. А., Хуррамов Х. М. У. Педагогические идеи мыслителей о профессии учителя в обществе //Наука и образование сегодня. – 2019. – №. 6-1 (41). – С. 80-82.

11. Ҳайитова Ф. А. и др. ВАЖНОСТЬ ИСПОЛЬЗОВАНИЯ РИСУНКОВ ПРИ ОПИСАНИИ ТЕКСТА РАБОТЫ НА УРОКАХ НАЧАЛЬНОГО КЛАССА //ФУНДАМЕНТАЛЬНЫЕ ОСНОВЫ ИННОВАЦИОННОГО РАЗВИТИЯ НАУКИ И ОБРАЗОВАНИЯ. – 2018. – С. 38-41.