

The Role of Artificial Intelligence in Developing Reading Literacy in Primary School Students

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Introduction. In recent decades, artificial intelligence (AI) has permeated various aspects of life, including education. In the modern world, where technology has become an integral part of the educational process, the role of AI in developing reading literacy in primary school students is becoming increasingly significant. Reading literacy is a crucial component of a child's overall development, as it not only influences academic success but also serves as a foundation for acquiring other key skills such as critical thinking, communication abilities, and creativity.

The purpose of this article is to examine how artificial intelligence can contribute to improving reading literacy among primary school students and to identify the prospects and challenges associated with integrating AI into the educational process.

1. Reading Literacy as the Basis of the Educational Process Reading literacy encompasses not only the ability to read but also the capacity to understand, analyze, and apply information in various life situations. It is a key skill necessary for successful learning in any subject, from mathematics to the arts.

For primary school students, developing reading literacy is especially important, as this period lays the foundation for academic skills. Primary school teachers face the challenge of ensuring that children not only learn to read but also develop the ability to analyze, interpret, and evaluate the material they read.

2. The Impact of Technology on the Educational Process In recent years, technology has been actively integrated into school education, creating new learning opportunities. Specifically, the use of AI has significantly improved the learning process and made it more personalized. Modern AI-based systems can analyze each student's needs and provide individual recommendations for skill improvement, including in the field of reading.

AI can not only diagnose a student's level of reading literacy but also offer appropriate materials, taking into account their interests, level of preparedness, and pace of learning. AI technologies can assess reading skills, provide interactive exercises, create personalized learning plans, and monitor student progress.

3. Application of Artificial Intelligence in Educational Platforms There are numerous platforms and applications that use AI to enhance reading literacy. Programs such as "Learning with AI," "Reading with Intelligence," and others integrate various methods and approaches to teaching reading, adapting them to the individual characteristics of each student.

An example of such applications is systems that analyze texts and ask students questions to check their comprehension. These systems can offer answer options or hints if a child struggles to

understand the content. As a result, students develop critical thinking skills, learn to understand text structure, and absorb important information.

Additionally, AI can assist in diagnosing learning difficulties. For instance, AI-based systems can analyze reading errors and determine where a student encounters challenges—whether it is insufficient attention to details, pronunciation issues, or an inability to identify the main idea of a text.

4. Advantages of Using AI for Developing Reading Literacy The use of artificial intelligence in education offers several significant advantages that impact the development of reading literacy in primary school students:

1. Individualized Learning. AI allows educational materials to be adapted to each student's level and needs. This is important as children have different paces and styles of information perception. Thus, AI helps create a personalized learning path, contributing to more effective reading skill development.

2. Motivation through Gamification. Many AI-based educational applications use game mechanics, which increase children's motivation. For example, students can complete tasks and earn points, making the learning process more engaging.

3. Feedback and Progress Monitoring. AI can quickly provide teachers and parents with information on how a child is mastering the material, what difficulties they face, and which aspects of reading require additional attention. This allows for timely adjustments to the learning process.

4. Accessibility and Flexibility. AI technologies enable students to study at any convenient time and from any location, expanding opportunities for independent and supplementary learning. This is especially important for children who may not have sufficient access to traditional educational resources.

5. Challenges and Limitations of Using AI in Primary Education Despite its clear advantages, the use of artificial intelligence in education is also associated with several challenges and limitations:

1. Lack of Qualified Specialists. To integrate AI into the educational process, specialists are needed who can not only implement these technologies but also effectively use them in working with children. In some regions, there is a shortage of such professionals.

2. Risks of Technology Dependence. It is important that AI use does not replace traditional teaching methods but rather complements them. Over-reliance on technology may reduce creative approaches and encourage mechanical information processing, which could negatively affect children's self-expression and independent thinking abilities.

3. Privacy Concerns. AI systems collect a large amount of data about children, their achievements, interests, and behavior. This creates risks of data leaks or improper use of personal information. Strict security measures must be observed when developing and implementing such systems.

4. Need for Ethical Standards. Clear ethical principles regarding the use of AI in children's education must be established to ensure that their rights are not violated and that biased algorithms that could negatively impact a child's development are not created.

Conclusion The role of artificial intelligence in developing reading literacy among primary school students is becoming increasingly significant. AI has the potential to individualize the educational process, enhance student motivation, and improve learning efficiency. However, despite all the

advantages, it is essential to consider the challenges associated with the implementation of these technologies and ensure their ethical and safe use. In the future, AI may become an indispensable tool in educational practice if it is properly integrated and used in conjunction with traditional teaching methods.

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