ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN CREATING PERSONALIZED SCIENCE TASKS FOR 4TH GRADE STUDENTS

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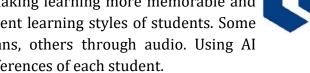Researcher Of Namangan State University, Uzbekistan

ABSTRACT

The article is a study in the field of educational technologies focused on the use of modern artificial intelligence technologies for individualization of primary school education. The authors consider the application of machine learning algorithms and personalized approaches to the formation of tasks in the natural sciences, adapted to the level of understanding of 4th grade students. The article highlights the main advantages of using artificial intelligence in education, such as increasing student motivation, adapting to different learning styles and taking into account the individual needs of each child. The authors also present practical examples of the successful implementation of artificial intelligence technologies in the educational process for fourth graders, demonstrating the effectiveness of personalized tasks in stimulating interest in natural sciences and increasing the overall effectiveness of learning at this stage of education.

KEYWORDS: Artificial intelligence, educational technologies, personalized learning, natural sciences, educational tasks for grades 4, educational technologies, innovations in learning, adaptive learning, intelligent systems, educational programs,cloud technologies in education.

INTRODUCTION

Nowadays, progress in the field of artificial intelligence (AI) technologies has become incredibly significant in the field of education. One of the current trends has been the use of AI to create personalized science tasks specifically adapted for elementary school students. This direction opens up new horizons in education, allowing you to individualize learning and make it more exciting and accessible for 4th grade children. Modern AI technologies allow us to develop educational programs that take into account the individual characteristics of each student[1]. Machine learning algorithms are able to analyze learning data, determine the level of knowledge and interests of each child. This opens the door to creating tasks adapted to the level of training and abilities of each student.

Using AI, you can create tasks aimed not only at teaching specific topics, but also at developing critical thinking, logical thinking and problem solving skills. For example, tasks can be adapted to the student's interests, using topics that are close to him or cause fascination[2]. Interactive learning methods implemented with the help of AI make the learning process exciting and interesting for children. The ability to interact with virtual environments, models and experiments allows students to "experience" science, making learning more memorable and understandable. AI can also take into account the different learning styles of students. Some children learn information better through visual means, others through audio. Using AI technology, you can create tasks that best match the preferences of each student.

AI systems also make it easier to assess the level of knowledge and progress of each student. Learning outcomes can be automatically analyzed, allowing teachers to plan further education more effectively and provide parents with feedback on their children's achievements and weaknesses. In today's world, where technology is rapidly pouring into the fields of education, the use of artificial intelligence (AI) is becoming a key factor in improving the learning process[3]. In this article, we will look at how artificial intelligence technologies are able to transform science tasks for 4th grade students, making them more individualized and exciting. One of the key points in education is the creation of personalized tasks that meet the individual needs of each student. Artificial intelligence technologies allow you to create unique learning scenarios, taking into account the learning style, interests and level of knowledge of each student. Artificial intelligence-based systems can analyze learning data and provide tasks that match a student's individual progress. For example, if one student successfully learns the material, the system may offer more complex tasks, thereby stimulating him to additional efforts. While a student experiencing difficulties will receive tasks with a level of difficulty adapted to his level of knowledge.

Mobile applications and online platforms using artificial intelligence technologies can offer interesting and engaging science assignments. For example, tasks can be associated with virtual experiments where students can observe the results of their decisions in real time[4]. It is important to emphasize that artificial intelligence technologies do not replace a teacher, but complement his role as a mentor. The teacher can receive feedback from the system and adapt his teaching method according to the individual needs of each student.

Artificial intelligence technologies bring innovation to education, allowing you to create personalized science tasks for 4th grade students. This approach not only increases the effectiveness of learning, but also makes the process more exciting and motivating, which contributes to the formation of interest in science from an early age.

CONCLUSION

Artificial intelligence technologies provide unique opportunities to create individualized and exciting science tasks for 4th grade students. This not only contributes to a better understanding of the subject, but also forms children's skills necessary in the modern world. Such innovations in education promise deeper and more effective assimilation of knowledge, making the learning process exciting and accessible to every child.

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