



METHODOLOGY FOR FORMING AN INDIVIDUAL LEARNING PATH FOR CHILDREN USING ARTIFICIAL INTELLIGENCE

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***Annotation** This article broadly explains the methodology of forming an individual learning path for children using artificial intelligence, which is becoming increasingly widespread today. It discusses how AI can be used in the modern globalized era to help learners acquire necessary knowledge and skills individually through various methods.*

***Keywords:** Artificial intelligence (AI), individual learning, methodology, ethical issues, qualitative research, external observation, formation, individualized education.*

Introduction

Artificial intelligence analyzes children's learning levels and progress using various algorithms. AI shows students' daily learning performance through diagrams and algorithms, creating convenience for individualized learning. If a learner experiences difficulties while studying individually, AI provides necessary guidance supported by scientific examples. This highlights the benefits, conveniences, and in some cases, the advantages of individualized learning.

Main part

AI systems consider students' learning styles and pace, making the learning process more effective and engaging. Such systems are also highly useful for teachers, allowing them to better meet students' needs.

Through AI, learners' levels can be analyzed, and various processes can be carried out, enabling teachers to quickly adjust the learning process. However, developing AI-based individualized learning systems may bring certain technical and ethical issues, such as data privacy, system reliability, and compatibility with individual needs. AI ensures anonymity and focuses on meeting learners' needs, and much research has been carried out in this direction.

AI-based individualized education systems provide opportunities for personalizing the learning process according to learners' knowledge levels, abilities, learning styles, and even psychological conditions. Many practical efforts and studies have been conducted in this field, and these approaches have been scientifically proven. AI also creates opportunities for teachers and students by increasing the effectiveness of the learning process. Research has also explored adaptive learning systems. For instance, Shute and Rahimi studied adaptive learning systems and analyzed how machine learning algorithms can be used in education. According to them, machine learning methods help guide learners into personalized learning processes, enabling them to further develop their knowledge and skills.

Adaptive learning systems also help manage the educational process by considering individual differences among learners. AI creates adaptive learning plans, curricula, personalized feedback, and tools that optimize learning. These systems monitor students' progress and adjust learning materials accordingly. As a result, every learner can study in a comfortable, effective way, access limitless information, and eliminate learning barriers. AI assists individuals in self-development at any time and place.

Research on creating AI-based individualized learning systems includes various methodologies: Qualitative research helps analyze children's learning experiences and the integration of AI systems into the educational process. This method provides deeper understanding of AI-based systems and supports research between learners and their educational mentors.

Experimental research evaluates the effectiveness of AI in education. Many studies show that AI algorithms and adaptive systems help determine learners' understanding levels, increase motivation, and boost interest in learning.

Conclusion

Forming an individual learning path for children using AI helps students identify their strengths and weaknesses through various methods. It supports personal development and creates convenience for learners. AI plays an important role in personalizing education and improving the learning process. It influences not only individual development but also future professional activities.

AI is now considered one of the most effective and convenient tools for personal growth. Many scientists worldwide have discussed this in their articles and books. New learners use AI in their scientific research, helping them work on self-development. Various methodologies for individualized learning using AI have been developed and widely implemented. AI systems support students individually, make learning interactive, track errors, provide feedback, and consider psychological factors.

The development of AI-based individualized learning systems increases students' motivation and helps them choose future career

paths. However, it is also important to consider challenges such as ensuring fairness and equal opportunities in education as AI technologies advance.

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