



THE EFFECTIVENESS OF ARTIFICIAL INTELLIGENCE-BASED ADAPTIVE LEARNING SYSTEMS IN FOREIGN LANGUAGE TEACHING

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ABSTRACT

This article covers the importance of artificial intelligence-based adaptive learning systems in teaching foreign languages, their effectiveness and their impact on the educational process. Issues of individual approach, real-time monitoring, increased academic performance, and increased motivation have also been analyzed. On the basis of modern technologies, ways to improve the process of language learning are shown.

Keywords: artificial intelligence, adaptive education, foreign languages, EFL, digital technology, personalized education, pedagogical efficiency, innovative technologies, digital education.

INTRODUCTION

The processes of globalization and information of today are gaining momentum, the perfect mastery of foreign languages is becoming an important need for each individual. As a result of the expansion of economic, political, cultural and scientific ties on a global scale, cooperation between different states is becoming more and more intense. In such conditions, knowledge of foreign languages is manifested as one of the main factors in achieving success not only in personal development, but also in professional activities. English, in particular, is a world leader as an international medium of communication, a language of science, innovation, business and modern technology. Therefore, today it is one of the urgent tasks to improve the quality of teaching foreign languages in the educational system, to introduce effective methods and tools.

In our country, special attention is paid to the modernization of the educational system, increasing the level of foreign language acquisition of the younger generation, training specialists in accordance with international standards. In recent years, a number of reforms have been implemented aimed at teaching foreign languages at all stages, from preschool to higher education. However, traditional educational methods cannot fully meet the individual needs of all students. Because each student's level of knowledge, acceptance rate, interest, and learning style are different from each other. Therefore, the need to implement innovative, flexible and person-oriented technologies into the educational process is increasing.

In this context, the penetration of artificial intelligence technologies into the field of education is creating new opportunities. Artificial intelligence is a state-of-the-art technology capable of analyzing large amounts of data, monitoring user activity, evaluating results, and developing individual recommendations. In particular, in the

teaching of foreign languages, Artificial Intelligence-based adaptive education systems serve to achieve effective results by forming educational content in accordance with the needs, abilities and level of knowledge of students. Such systems detect reader errors, determine which subjects are in difficulty, and offer suitable additional exercises, explanations, or more complex assignments.

Main part

The essence of adaptive education systems

Adaptive education system provides educational content adapted to the student with an analysis of individual characteristics, level of knowledge, interest, pace of acquisition and mistakes made by him. The main goal of these systems is to educate each student based on a personal approach and increase the effectiveness of the educational process. While traditional education often uses the same assignment and the same methodology for all students, adaptive learning takes into account the need of each student individually.

Artificial intelligence plays an important role in adaptation of teaching materials. The system regularly monitors the movements of the student on the platform, the speed of performing exercises, correct and incorrect answers, on what topics he is experiencing difficulties. The data obtained is analyzed, the level of knowledge of the student is determined, and the next stage corresponding to it is automatic

One important advantage of artificial intelligence-based educational technologies is the ability for a teacher to adapt a single teaching material to the needs of students of different levels. In the traditional educational process, the same text, exercise or assignment is presented to all students in the same form. However, the level of knowledge, vocabulary richness, grammatical preparedness, and the rate at which a subject is received vary among students in the classroom. For this reason, the same material will not be equally effective for everyone.

With the help of artificial intelligence tools, the teacher can reproduce a single material on several levels. For example, one text in English can be presented in a simplified form for entry-level readers, close to the original for the intermediate level, and with complex questions and analytical assignments for the higher level. This allows each student to receive an assignment appropriate to their level of knowledge. Teacher chooses a single text on the topic "Environmental Problems". Through artificial intelligence:

For the beginner level (A1–A2), the text is abbreviated, written in simple words, and simple questions are drawn up.

For the middle level (B1–B2), the main text is saved, New word annotation and sentence-making exercises are given.

For higher level (C1), discussion questions, essay writing, or critical thinking assignments are added.

As a result, it will be possible to work with the entire class on the basis of one topic, but each student will perform a task corresponding to his level. This method provides a differential approach and actively attracts all students in the class.

Artificial intelligence also helps the teacher adjust grammar exercises as well. For example, Present Perfect can be used to create sentence-filling exercises for weak students, question-and-answer exercises for middle-level students, and free conversation or written assignments for strong students. This is the teacher's time

Adaptation of educational materials through artificial intelligence provides a number of pedagogical advantages. These advantages are listed in the table below (table 1).

Advantages	Descriptions
Ensuring an individual approach	Each learner is given tasks appropriate to their level of knowledge and needs.
Increasing educational effectiveness	Adapted materials help learners achieve a higher level of understanding of the topic.
Strengthening learner motivation	Learners become more interested because they complete tasks suited to their abilities.
Opportunity to work with students of different levels	It becomes possible to work effectively with both strong and weaker learners in one group at the same time.
Saving the teacher's time	Artificial intelligence helps simplify texts and create tests and exercises.
Improving assessment accuracy	Each learner is assessed through tasks appropriate to their level.
Developing independent learning	Learners become accustomed to working independently through individual tasks.
Improving lesson quality	The lesson process becomes more organized, engaging, and productive.

From the table data, it can be seen that artificial intelligence-based adapted education systems are important in improving lesson efficiency, providing an individual approach, and enhancing student motivation.

CONCLUSION

In conclusion, adaptive education systems based on artificial intelligence significantly improve the process of teaching foreign languages. They make it possible to adapt the content of education, taking into account the individual needs of students, the level of knowledge and the speed of mastering. As a result, each student receives knowledge through assignments appropriate to their potential, which increases educational effectiveness.

In addition, such systems strengthen the motivation of students, develop independent learning skills and facilitate the work of the teacher. And the teacher, using artificial intelligence, will be able to more effectively organize the course process, work simultaneously with students of different levels and provide an individual approach.

At the same time, adaptive education systems bring the educational process into a modern, interactive and consequential form. Further development of these technologies in the future will lead to the development of foreign languages.

REFERENCES

1. Burima, M. (2022). Teaching Foreign Languages for the Adaptation Period: Methodological.Challenges.Proceedings.<https://doi.org/10.21125/ICERI.2022.1055>
2. Guonyore,K. (2024). The Role of AI-based Adaptive Learning Systems in Digital Education. DOI:10.24368/jates380. University of Dunaújváros
3. Roll, I., & Wylie, R. (2016). Evolution and revolution in artificial intelligence in education. International Journal of Artificial Intelligence in Education, 26(2), 582–599. <https://doi.org/10.1007/s40593-016-0110-3>
4. Userbayeva Feruza Inoyat Qizi (2023). Ta'lim jarayoniga sun'iy intellekt texnologiyalarni joriy etishning samaradorligini oshirish. Raqamli iqtisodiyot (Цифровая экономика), (5), 171-177.

