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METHODOLOGY FOR TEACHING ENGLISH TO PRIMARY SCHOOL PUPILS USING ARTIFICIAL INTELLIGENCE TECHNOLOGIES TAKING INTO ACCOUNT THE INCLUSIVE COMPONENT

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This article describes a method using artificial intelligence (AI) to teach English to young people, supporting inclusive education. Based on research in the field of education, the method includes several stages: initial diagnosis, personalized learning goals, adaptive learning with the support of artificial intelligence, a variety of learning formats and activities, continuous monitoring of progress and teacher support. This model provides individual and inclusive education for children with different abilities, promoting equal participation in modern primary school life.

Keywords: inclusive education; artificial intelligence; adaptive instruction; multi-modal learning activities; methodological algorithm.

The rapid development of artificial intelligence technologies is changing educational practices around the world. For elementary school students who are still developing their cognitive and

linguistic skills, artificial intelligence-based resources such as speech recognition software and adaptive learning platforms offer new useful opportunities (Adeleye et al., 2024). These technologies make it possible to adapt learning to the needs of each child, which will increase student motivation and provide real-time feedback, which is impossible to achieve with traditional classroom teaching.

At the same time, the importance of inclusivity in education has increased worldwide, with special attention being paid to learning strategies that take into account students' different abilities and experiences (Anis, 2023). Children with special educational needs, neurodivergent profiles, language difficulties, and different cultural or social backgrounds study in modern elementary schools. Thus, strategies and methods of inclusive education supported by artificial intelligence should be combined in effective modern English language teaching.

This article provides teachers with a clear plan for implementing artificial intelligence in inclusive English language teaching in elementary schools, describing a methodological algorithm that is designed to meet both needs.

Numerous studies have already shown how artificial intelligence can help in early language acquisition. Intelligent learning programs can instantly change the complexity of tasks based on information provided by students (Mohammed & Watson, 2019). Artificial intelligence-based speech recognition tools, which are used to reduce anxiety, have allowed young students to check their pronunciation without worrying about being judged by their peers (Xiao, 2025).

Artificial intelligence-based language learning tools contain gamified elements such as rewards, animations, and game tasks that increase motivation and keep children aged 6-10 focused (Duisenova and Zhorabekova, 2024). These tools make it possible to distinguish common developmental errors from genuine learning difficulties, allowing the teacher to intervene at an earlier stage and with greater precision.

Inclusive education aims to ensure equal opportunities for every student while removing barriers that could hinder their career growth (Anis, 2023). When teaching a foreign language, teaching materials, teaching methods, and assessments should be adapted to take into account the various social, cognitive, and linguistic characteristics of students.

Universal Learning Design (UDL) is often seen as a successful foundation for inclusive education. It encourages different approaches to providing information by demonstrating student understanding and engagement (Katz, 2013). For example, audio materials are designed to help students who have difficulty reading, while people who have difficulty concentrating and paying attention can benefit from shorter and visually appealing classes.

Artificial intelligence can improve inclusive education by providing resources such as text-to-speech for students with dyslexia, visual aids for children with speech delays, and subtitles for those who have difficulty processing auditory data (Ahmed et al., 2025). In addition, analytics created with the help of artificial intelligence allows us to identify the learning characteristics of students with disabilities or learning disabilities, which allows us to more effectively meet their needs.

However, researchers emphasize the importance of ethical AI implementation, as educators must continue to play a central role in integrating AI to protect against biased algorithms that can negatively affect vulnerable students (Sghaier et al., 2022). Artificial intelligence should serve as a tool that enhances rather than replaces the professional judgment of educators.

An algorithmic approach to teaching English using artificial intelligence in inclusive learning environments

The proposed algorithm combines artificial intelligence resources with inclusive teaching methods to improve English language acquisition by elementary school students. It consists of six interrelated stages:

1. Diagnostic assessment: This initial stage is necessary to assess each student's language proficiency, cognitive skills, and educational requirements (Loor et al., 2024). Artificial intelligence tools help to carry out automated diagnostics and provide teachers with in-depth analysis.
2. Personalized goal development: Diagnostic results obtained using artificial intelligence tools will help establish individual learning goals that match each student's learning abilities and inclusive needs (Toyokawa et al., 2023).
3. Learning is carried out using adaptive artificial intelligence: games, pronunciation

software, and reading exercises can be used to adapt lessons according to student feedback. The educational material can be further adjusted depending on the students' academic performance and learning rate (Anis, 2023).

4. Multi-modal learning activities: To increase accessibility for different groups of students, a combination of sensory means, including auditory, visual, and kinesthetic components, can be used. For example, daily lessons may include interactive fairy tales, speech recognition exercises, and collaborative activities. (Topkaya et al., 2025).

5. Continuous assessment and data entry: Artificial intelligence systems monitor student performance in real time and provide immediate personalized feedback. (Loor et al., 2024).

6. Teacher Mediation: Teachers play an important role in guiding the learning process by ensuring inclusivity and interpreting the data generated by artificial intelligence (Lopez et al., 2025).

The proposed model combines personalized AI-based learning with inclusive teaching methods. Research shows that AI tools increase engagement by providing accurate feedback and adapting instructions to meet student requirements (Loor et al., 2024). At the same time, inclusive approaches ensure that students with disabilities, learning disabilities, or multilingual education can also participate fully in learning (Kannadhasan, 2024).

Despite its potential, obstacles remain, such as the need for teacher training (pedagogical issues), technological difficulties, and data set limitations (Salas Pilco et al., 2022). In addition, artificial intelligence is unable to reproduce the complex emotional, social and cultural dynamics present in the relationship between a teacher and a student.

Artificial intelligence tools have significant potential to improve English language teaching in primary schools. When integrated into an inclusive system, AI provides an individual learning rate, the ability to adapt tasks and various types of activities. The six-step method described in this article - diagnosis, planning, adaptive learning, multimodal classes, teacher monitoring, and mediation - provides a structured approach to meeting the needs of different students. By integrating artificial intelligence tools with inclusive teaching methods, teachers can provide engaging, fair, and effective English language instruction for all students. This method opens the way to a future where human leadership and technological progress coexist, allowing students to confidently master the language throughout their lives.

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МЕТОДИКА ОБУЧЕНИЯ АНГЛИЙСКОМУ ЯЗЫКУ МЛАДШИХ ШКОЛЬНИКОВ С ИСПОЛЬЗОВАНИЕМ ТЕХНОЛОГИЙ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА С УЧЁТОМ ИНКЛЮЗИВНОГО КОМПОНЕНТА

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В статье представлена методика обучения английскому языку младших школьников на основе технологий искусственного интеллекта (ИИ), направленная на поддержку инклюзивного образования. На основе анализа современных исследований в области педагогики и цифровых технологий предложена шестистадийная модель: 1) диагностическая оценка, 2) постановка персонализированных учебных целей, 3) адаптивное обучение с использованием ИИ, 4) применение мультимодальных форматов и видов деятельности, 5) непрерывный мониторинг прогресса и 6) педагогическое сопровождение. Данная модель обеспечивает индивидуализированный и инклюзивный подход к обучению детей с разными образовательными потребностями, способствуя равному участию всех учащихся в образовательной среде начальной школы.

Ключевые слова: инклюзивное образование; искусственный интеллект; адаптивное обучение; мультимодальные учебные активности; методический алгоритм