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NAVIGATING THE CHALLENGES AND LIMITATIONS OF AI IMPLEMENTATION IN FOREIGN LANGUAGE EDUCATION

Annotation

Artificial intelligence (AI) is rapidly transforming education, offering exciting new possibilities for foreign language instruction. From personalized learning platforms to interactive chatbots and automated assessments, AI has the potential to alter how we learn and teach languages. However, this technological revolution also brings challenges. This article explores these challenges and some limitations of using AI in language learning.

Key words: AI, language models, foreign language teaching, challenges, limitations, adaptive learning, chatbots, assessment, ethics, pedagogy.

XORIJIY TILLARNI O'QITISHDA SUN'IY INTELLEKTNI JORIY ETISHDAGI QIYINCHILIKLAR VA CHEKLOVLAR TAHLILI

Annotatsiya

Sun'iy intellekt (SI) texnologiyalari ta'lim sohasida, xususan, xorijiy tillarni o'qitishda katta imkoniyatlar yaratmoqda. Moslashuvchan o'quv platformalari, interaktiv chatbotlar va avtomatlashtirilgan baholash tizimlari til o'rganishda katta salohiyatga ega. Biroq, bu texnologiyadan foydalanish bir qator muammolarni ham keltirib chiqaradi. Ushbu maqolada SI ning til o'rganishda qo'llanilishidagi ushbu muammolar va ba'zi cheklovlar tahlil qilinadi.

Kalit so'zlar: SI, til modellari, xorijiy til o'qitish, qiyinchiliklar, cheklovlar, moslashuvchan o'rganish, chatbotlar, baholash.

ИЗУЧЕНИЕ ПРОБЛЕМ И ОГРАНИЧЕНИЙ ПРИМЕНЕНИЯ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В СФЕРЕ ОБУЧЕНИЯ ИНОСТРАННЫМ ЯЗЫКАМ

Аннотация

Искусственный интеллект (ИИ) быстро трансформирует образование, открывая захватывающие новые возможности для обучения иностранным языкам. От персонализированных учебных платформ до интерактивных чат-ботов и автоматизированных оценок, ИИ обладает потенциалом изменить то, как мы изучаем и преподаем языки. Однако эта технологическая революция также создает проблемы. В этой статье исследуются эти проблемы и некоторые ограничения использования ИИ в изучении языков.

Ключевые слова: ИИ, языковые модели, обучение иностранным языкам, трудности, ограничения, адаптивное обучение, чат-боты, оценивание.

Introduction. The use of AI technologies in education, especially in foreign language teaching, can create certain technical difficulties. First, effectively training large language models (LLMs) like ChatGPT, Elsa Speak, and Replika, and ensuring their stable operation, requires a vast amount of high-quality and diverse data. As Bender et al. highlight, training LLMs involves substantial data requirements, and the quality and diversity of this data significantly impacts model performance [1]. Creating such a database, properly labeling it, and regularly updating it is a complex, time-consuming, and resource-intensive process. This data curation challenge is further discussed by Dodge et al. who emphasize the importance of careful data selection and preprocessing for effective LLM training [3]. Technical failures, such as server outages or low internet speed, can disrupt the continuity of the learning process. Especially in remote areas, the poor quality of internet connection further limits the possibilities of using AI technologies (UNESCO, 2021) [8]. This digital divide creates unequal access to AI-powered educational resources. To address these problems, a comprehensive approach and consistent investment aimed at creating high-quality databases, improving AI algorithms, increasing their ability to understand context, and creating a strong technical infrastructure are required. As Holmes et al. (2019) argue, realizing the potential of AI in education requires sustained investment in research and development, infrastructure, and teacher training [5].

Materials and Methods. This article synthesizes existing research on AI in education, focusing on foreign language learning. It draws upon scholarly articles, reports, and expert opinions to analyze the current landscape, identify key challenges, and propose solutions. The analysis incorporates theoretical frameworks like Laurillard's Conversational Framework [6] and introduces the SAFE model (Set, Adapt, Foster, Evaluate) as a practical guide for teachers. While specific empirical studies are referenced, this work primarily offers a conceptual overview and framework for future research.

Discussion and Results. Integrating AI into language education presents several pedagogical, ethical, and practical challenges. First of all, teachers need sufficient knowledge and skills to effectively use AI language models [3]. If teachers do not have experience working with such technologies and do not know how to integrate them into the learning process, in which situations which model is appropriate to use, how to analyze and evaluate the content generated by AI, it will not be possible to achieve the expected results. In addition, not understanding the capabilities and limitations of AI models can also lead to the formation of incorrect expectations among teachers and ultimately lead to inefficient use of these technologies. In addition, it is necessary to combine AI language models with traditional teaching methods. Teachers need to clearly define when, how, and for what purposes to use AI technologies. This requires careful planning and flexibility of the lesson process.

Another important aspect is to study the impact of AI technologies on students' motivation. It should be noted that not all students are equally interested in working with AI models. Especially for students who do not have enough experience using digital technologies, new technologies, in particular, the fear or distrust that they may be replaced, may arise [2]. This can be

caused by students' previous negative experiences with technology, a lack of confidence in their digital literacy, fear that their speech will not be "understood" by the machine, anxiety about being evaluated by AI, and reduced communication with the teacher. As noted by Luckin et al., students' perceptions of and engagement with technology can be influenced by various factors, including their prior experiences and perceived self-efficacy [7]. Therefore, teachers should take into account the individual characteristics of students when using AI technologies and try to increase their motivation.

There are also a number of ethical and social issues related to the use of AI technologies in education. First, ensuring confidentiality when collecting and processing students' personal data is crucial. Information such as students' names, ages, grades, words spoken and texts written during interaction with the AI model should be kept confidential and used only for educational purposes. To ensure the security of this data, it is necessary to use strong encryption algorithms, restrict access to data, and regularly conduct security audits.

Secondly, excessive use of AI technologies can negatively affect students' socialization skills and lead to a decrease in interpersonal communication. Therefore, teachers should use AI technologies in moderation and involve students in real-life communication. In addition, it is important to develop students' skills in distinguishing "human-machine" interaction from "human-human" communication [4].

As mentioned above, an approach based on pedagogical principles is required for the effective integration of AI technologies, in particular, language models, into the educational process. In organizing the educational process, in particular, foreign language teaching, the importance of communication between the teacher and the student is invaluable. From this point of view, the "Conversational Framework" proposed by D. Laurillard deserves special attention. This model is based on four important principles of the educational process: discursiveness, adaptability, interactivity, and reflexivity. These principles play an important role in the effective integration of AI technologies, in particular, language models, into the language teaching process [6].

In Laurillard's model, discursiveness means the mutual exchange of ideas between the teacher and the student, which leads to a deeper understanding of the educational material. According to this principle, the communication between the teacher and the student should be free and open, the educational process should be based on mutual exchange of ideas, discussion, and questions and answers. Especially in language learning, it is important for students to freely express their opinions, ask questions, and participate in discussions to develop their language skills.

Adaptability means that the educational process is organized in accordance with the individual needs of the student. In other words, the teaching process should be adaptable, the teacher should be able to change the presentation style, the complexity of educational materials, and the type of tasks depending on the student's level of knowledge, interests, and learning pace.

Interactivity ensures that the student actively interacts with the learning material and receives quick feedback on their actions. According to Laurillard's model, the relationship between the teacher and the student should be interactive, that is, the student should perform a task that demonstrates the level of knowledge and skills they have acquired. After that, the teacher evaluates the student's level of knowledge and gives them clear and constructive recommendations [6].

Reflexivity involves the student analyzing their own learning process, working on their mistakes, and developing the ability to independently manage their knowledge. The learning process should be reflexive, that is, the teacher should give the student the opportunity to return to the initial task and correct their mistakes. The student compares their initial and corrected answers, analyzes the differences, and thus the learning process takes place.

To address the challenges that may arise when using AI language models, ensure their effective integration into the learning process, and create an optimal model of collaboration between humans and artificial intelligence, we propose the SAFE model within this study. This model includes four main components: Set (setting goals), Adapt (adapting), Foster (fostering), and Evaluate (evaluating and improving). It emphasizes setting clear learning goals, adapting the chatbot interaction to the learner's level and needs, fostering learner engagement and fluency, and continuously evaluating and improving the learning process based on feedback and progress. By focusing on these four key components, teachers can effectively leverage AI tools to personalize language instruction and enhance student outcomes.The SAFE model provides teachers with a clear direction when using AI technologies and helps them effectively integrate these technologies into the learning process.

Although artificial intelligence (AI) technologies create great opportunities in the field of education, a number of important tasks need to be done to fully realize its potential.

Increasing the digital competence of teachers:

Organizing special trainings and courses to teach teachers how to use AI tools and increase their digital competence;

Providing teachers with the latest information and research results on the use of AI technologies in education;

Studying the experience of teachers using AI tools and taking their feedback into account.

Developing students' digital literacy:

Teaching students how to use AI technologies, critically analyze information, and act safely in a digital environment;

Informing students about the capabilities and limitations of AI technologies;

Studying the experience of students using AI technologies and taking their needs into account.

Developing cooperation to create effective AI tools in the field of education:

Establishing close cooperation between educators, linguists, methodologists, and software developers;

Creating user-friendly and effective AI tools, taking into account the specific aspects of foreign language teaching methodology, the age characteristics of students, individual needs, and educational goals;

Conducting regular scientific and practical research to assess the effectiveness of AI tools in foreign language teaching, identify their advantages and disadvantages, and improve them, and implementing the results into educational practice.

Future directions. Although AI technologies are opening up great opportunities in foreign language teaching, issues such as their effective integration into the educational process, teacher training, meeting the individual needs of students, and evaluating the long-term impact have not yet been fully studied. From this point of view, we propose the following priority directions for future research:

Studying the effectiveness of the integration of AI technologies into foreign language education through empirical research, in particular, conducting a comparative analysis across different educational levels (for example, academic lyceums, higher education) and student groups (age, language proficiency level);

Developing methodologies and programs for training teachers to use AI tools, organizing practical trainings and seminars aimed at increasing their digital competence, pedagogical skills, and knowledge of AI ethics;

Creating new interactive lesson plans and teaching technologies based on the combination of AI and traditional teaching methods, taking into account the individual educational trajectories of academic lyceum students, and evaluating their effectiveness through experimental research;

Conducting longitudinal studies aimed at studying the long-term impact of using AI technologies on foreign language learning, in particular, on motivation, independent learning skills, and the development of communicative competence.

Conclusion. AI offers significant potential for transforming foreign language instruction. However, realizing this potential requires addressing the multifaceted challenges discussed. Prioritizing teacher training, ethical considerations, and a human-centered approach is essential. Future research will guide

the effective and responsible integration of AI in language　　education.

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