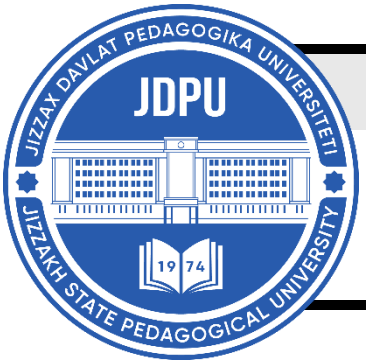
DOI: https://doi.org/10.37547/mesmj-V7-I1-22 Pages: 182-188

MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



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LLMS AS AN INSTRUMENT FOR SIMULATING DIALOGIC CONVERSATION IN SECOND LANGUAGE ACQUISITION

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ABOUT ARTICLE

Key words: Dialogue, speech, generative language models, simulation, foreign language, artificial intelligence, pragmatics, competence, learning, foreign language.

Received: 21.01.26
Accepted: 22.01.26
Published: 23.01.26

Abstract: This article analyzes the potential of integrating large language models (LLMs) into developing dialogic competence in foreign language learners. LLMs are viewed as a tool for creating a virtual communication environment capable of simulating natural communication conditions. This article describes methodological approaches to using AI for the successful acquisition of dialogic speech and adaptive learning. Particular attention is paid to the potential of technology in teaching and the role of the teacher in the new educational paradigm. Developing spontaneous dialogic speech skills requires regular practice with a partner who has a high level of linguistic and pragmatic competence.

Introduction. One of the central problems in foreign language teaching methodology remains the lack of a natural language environment within classroom settings. Traditional forms of activity (student pair work, teacher-student dialogues) are often limited by rigid time constraints. In this context, the emergence of generative language models (Large Language Models, LLMs), such as ChatGPT and Claude, opens new horizons for simulating an interactive speech environment.

Dialogic discourse is characterized by a high degree of spontaneity, situationality, and reactivity. According to the communicative approach, the success of learning depends on creating conditions that as closely as possible resemble real communication.

Generative AI models differ from classical previous-generation chatbots in their ability to maintain conversation context, interpret complex user intentions, and generate responses that are linguistically indistinguishable from human speech. This allows LLMs to be viewed not merely as a reference resource, but as a full-fledged interlocutor.

The digital transformation of education in recent years has led to a re-evaluation of the foreign language teacher's toolkit. While computer technology previously played a primarily supportive role, the development of artificial intelligence—and specifically Large Language Models (LLMs)—has turned AI into an active subject of the educational process. New generation generative models, such as GPT-4, Claude, and ChatGPT, demonstrate an unprecedented level of natural language proficiency, enabling their use as full communication partners.

The primary difficulty in teaching dialogic speech lies in the need for constant feedback and the non-linearity of conversation development. 'The integration of AI simulators into teaching practice allows for a shift in emphasis from formal correctness to the functionality of speech, developing students' ability to react appropriately to unpredictable remarks from an interlocutor.' [4] Traditional software tools were unable to provide the necessary flexibility of communication. In contrast, LLMs are capable of simulating a natural dialogic environment, adapting to the student's proficiency level, supporting a wide range of topics, and reacting instantly to the user's speech intentions. This paper examines the methodological potential of LLMs as an adaptive training tool capable of compensating for the lack of a language environment and enhancing the efficiency of developing students' discursive skills.

Materials and methods. The generative language model ChatGPT was utilized as the primary research tool. The selection of this model was motivated by its ability to maintain long-term context, its high degree of linguistic accuracy, and its capacity to simulate various registers of communication.

The material for creating the simulation environment consisted of specially developed instruction sets (prompts) aimed at initiating dialogic interaction.

The following methodological techniques were employed to simulate a natural environment:

• Role Personalization: The AI was assigned specific roles and tasks, which required pragmatic flexibility from the student.

• Utilization of the Correction Function: At each stage of the dialogue, the LLM performed an analysis of the lexical and grammatical errors made by the student.

The efficacy of the development of dialogic competence was evaluated based on four criteria: speech fluency, lexical and grammatical complexity, and discursive initiative—the ability to maintain a dialogue, ask follow-up questions, and employ strategies to take the initiative in conversation

Result and discussion. The research results confirm the hypothesis that modern generative large language models (LLMs) can effectively serve as a tool for simulating a natural dialogic environment. In contrast to traditional substitution exercises or dialogue memorization, interaction with an LLM facilitates the improvement of conversational skills at an accelerated pace. The student does not know in advance what response the model will provide, which compels them to mobilize all cognitive resources to decode the message and construct a counter-reply. This brings the learning situation as close as possible to the conditions of real-life communication.

The findings also revealed that the effectiveness of the simulation is directly dependent on the quality of the instructions provided. “The development of AI has significantly expanded the capabilities of corpus technologies." [1;306]

Despite these successes, certain drawbacks were identified during discussions with students. The primary issue is the AI’s excessive 'correctness' and politeness, which does not always correspond to the actual linguistic behavior of native speakers in informal settings. The AI rarely employs slang or interrupts the interlocutor, creating a somewhat idealized model of dialogue. Furthermore, the absence of visual and non-verbal contact (facial expressions, gestures) remains a significant limitation that must be compensated for during classroom sessions with a teacher.

Dialogic speech, in contrast to monologic speech, is characterized by a high degree of interactivity, unpredictability, and reliance on the situational context. Traditional foreign language teaching methodology often faces the issue of declining interest in classroom dialogues due to the predictability of fellow students' responses.

Generative language models (LLMs) address this problem through their capacity for reactive behavior. Unlike rigidly programmed systems, LLMs analyze each of the learner's utterances within the broad context of the entire conversation. Thus, the LLM acts not merely as a drill tool, but as a simulator of live discourse, ensuring the authenticity of verbal interaction.

The implementation of generative language models (LLMs) marks the beginning of a new era, where artificial intelligence becomes not just a supporting service, but an intellectual accelerator capable of radically transforming human cognitive activity. The positive aspects of

using these models span nearly all spheres of human life, providing an unprecedented level of efficiency and innovation.

Within the educational paradigm, LLMs fulfill the long-standing vision of educators regarding fully personalized learning. They operate as adaptive tutors capable of explaining material an infinite number of times, adjusting to the learner's pace, age, and specific interests. 'Despite their technological nature, modern AI models are capable of mimicking the empathy and engagement of an interlocutor, which enhances the student's intrinsic motivation to sustain a dialogue in a foreign language.' [7] In foreign language acquisition, this is manifested through the creation of a safe simulation environment where students can practice spontaneous dialogues without fear of social judgment. 'AI technologies allow for the modeling of highly specialized professional communication situations, providing the student with the necessary terminological tools within the dialogue.' [6] Furthermore, AI can instantaneously switch between roles — from a strict examiner to a friendly conversationalist — enabling the practice of diverse pragmatic communication scenarios.

“The application of digital technologies in education makes it possible to track learning analytics for each student, as all works created in the digital environment are stored.” [2, 125]

The use of AI for brainstorming enables the generation of hundreds of hypotheses and concepts within minutes. In science, these models assist researchers in correlating data from related disciplines, facilitating interdisciplinary discoveries. In creative industries, AI becomes a partner in co-creation, helping to structure complex plotlines in literature or suggesting visual and textual metaphors in design. This allows humans to shift their focus from routine execution to high-level strategic vision and editing. The socio-inclusive aspect of LLMs cannot be overstated. For individuals with speech or writing impairments, as well as those with dyslexia, generative models serve as an indispensable intermediary, helping them articulate thoughts clearly and professionally. Adaptive translation technologies dismantle not only linguistic but also cultural barriers, enabling speakers of rare languages to access the global body of knowledge. Moreover, AI contributes to bridging the digital divide by providing high-quality expert support (in medicine, law, or engineering) to residents of regions facing an acute shortage of qualified specialists.

"With the development of new technologies and innovations in science and medicine, it is impossible to imagine any language without the constant updating of its vocabulary. Global globalization has accelerated this process." [10].

The linguistic flexibility of these models allows them to be used as tools for stylistic and pragmatic correction. AI can instantaneously transform dry technical text into an engaging

script or adapt an official directive for a general audience while maintaining semantic accuracy. 'Dialogue with AI implements the principle of situational learning: communication occurs not for the sake of studying grammar, but for the purpose of solving a specific communicative task assigned to the student.' [8] Ultimately, generative language models function as a foundation that, working in symbiosis with human intuition and ethical oversight, exponentially amplifies the creative, analytical, and communicative potential of civilization, paving the way for solving global problems previously deemed insurmountable.

Conclusion. In conclusion, it can be observed that generative language models (LLMs) represent more than a mere technological innovation; they signify a fundamental paradigm shift in how knowledge is processed, created, and transmitted. Their capacity for profound learning personalization, the simulation of complex communicative environments, and the automation of routine cognitive tasks offers unprecedented opportunities for the advancement of human potential.

“Although starting a language in early grades has many advantages, we cannot rely on an early start alone to increase the levels of English language proficiency of our students, nor even the selection of an appropriate program model”.[9,7]

Within the realms of education and linguistics, LLMs serve as a bridge that overcomes psychological barriers and the deficit of linguistic practice, granting every learner access to an inexhaustible resource of adaptive support. Furthermore, their inclusive potential facilitates the construction of a more equitable and accessible world, dismantling barriers between languages, cultures, and physical modalities of information perception.

However, while acknowledging the myriad benefits of AI, it is crucial to recognize that its efficacy is maximized only through a harmonious symbiosis with human intelligence. 'The advantage of intelligent bots over traditional methods lies in instantaneous feedback, which enables students to adjust their dialogic strategy directly during the speech act' [5]. LLM technologies do not supersede human agency but rather augment its capabilities, necessitating the development of new competencies such as critical thinking, strategic goal-setting, and ethical oversight. Ultimately, generative models act as a potent catalyst for scientific, technological, and social progress, paving the way toward a more efficient, creative, and inclusive future.

The primary advantage of integrating AI into the instructional process is the capacity to create a highly adaptive simulation environment. Understanding the fundamental principles of AI and its limitations will help identify ways to apply it in foreign language teaching, foster professional growth and self-development among educators, and facilitate the creation of more

engaging and high-quality instructional materials for higher education institutions' [3, 83]. Students gain the opportunity to practice spontaneous speech within an unrestricted timeframe, navigating various pragmatic scenarios ranging from everyday situations to professionally oriented discourse.

It was found that the effectiveness of teaching dialogue using AI depends directly on the methodologically sound design of prompts. The ability to model complex communicative situations and assign specific social roles and levels of difficulty to the AI enables the implementation of a personalized learning path for each student—an outcome that is virtually unattainable within traditional group-based settings.

However, the research has demonstrated that AI cannot fully substitute for human interaction. "Dialogue with AI requires the learner to master the coherence and logical progression of an utterance, which directly influences the formation of discursive competence within the framework of the communicative approach" [4]. Consequently, the teacher's role is transformed: from being the primary source of information, they evolve into an architect of the learning environment, a moderator, and an expert capable of steering the student's interaction with AI in a constructive direction.

Looking ahead, the continued evolution of AI technologies—including the refinement of speech recognition and synthesis systems—will pave the way for even more realistic multimodal simulators. Thus, artificial intelligence facilitates a transition to a fundamentally new level of foreign language proficiency that meets the challenges of the digital era.

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