

**LIMITS OF ARTIFICIAL INTELLIGENCE CREATIVITY AND THE ESSENCE
OF INTEGRATED LESSONS**

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Abstract: This article provides a comprehensive linguistic analysis of texts generated by artificial intelligence (AI) and examines their inherent limitations. Specifically, AI-generated texts are compared with human speech based on syntactic, semantic, pragmatic, stylistic, and discursive dimensions. Furthermore, the article highlights the pedagogical and psychological significance of integrated education, particularly its importance in primary school mother tongue lessons. The integrative approach reveals opportunities for developing systemic thinking, creativity, communicative competence, and individual abilities in students. The research findings underscore the necessity of effectively utilizing AI in the educational process and improving the methodology of linguistic analysis.

Keywords: artificial intelligence, integrated education, linguistic analysis, pragmatics, stylistics, semantics, discourse, corpus linguistics, primary education, mother tongue instruction, methodology, language evolution.

Integrated lessons are instrumental in preparing students for real-world challenges. In reality, academic disciplines do not function in isolation but work together within a systemic framework. For instance, understanding an environmental issue requires knowledge of biology, geography, physics, chemistry, and linguistics. In this sense, it is crucial to teach children systemic thinking and complex analysis through integrated lessons at school. This opportunity is most widely manifested in mother tongue classes. Language is an expression of thought, communication, knowledge, and a vehicle of culture. Therefore, mother tongue lessons integrated with other subjects serve not only to impart knowledge but also to educate the child, shaping their aesthetic taste and moral values.

Moreover, the integrated approach allows each student to demonstrate their individual abilities. Some may excel in storytelling, others in drawing, and some in group activities. This enables the pedagogue to identify each child's potential and provide education based on an individual approach. Consequently, the child feels like an essential participant in the lesson, which increases their motivation. Integrated education also creates favorable opportunities for parental involvement. Extracurricular activities—such as project work, creating riddles, excursions, and creative tasks—are activities that can be continued within the family environment.

The linguistic analysis of AI-generated texts must be carried out not only at the syntactic and semantic levels but also from pragmatic, stylistic, and communicative perspectives. This process is not limited to analyzing the grammatical structure or semantic coherence of the sentences generated by the model. On the contrary, the functional load, contextual relevance, and social and cultural appropriateness of the text must be deeply analyzed. Language manifests itself not only as a means of communication but also as a social phenomenon.

In the process of pragmatic analysis, the communicative intent of the information technology model, the contextual appropriateness of sentences, the level of interaction with the interlocutor, and the social role of the speech actor are of great importance. For example, does an advertisement, letter, or article written by AI comply with human communication conventions? These aspects must be studied in comparison with texts created by humans.

Furthermore, there are stylistic limits to AI creativity. Texts written by humans often exhibit specific stylistic devices, such as artistry, figurativeness, metaphors, and irony. AI, however, often relies on a neutral or normative style. Although advanced models like GPT-4 or Mistral have the ability to write according to stylistic instructions, their stylistic sensitivity still lags significantly behind natural speech. This is particularly evident when compared with literary texts written in the Uzbek language.

Another important methodological approach in linguistics is corpus analysis. AI models are often trained on and generate text based on vast corpora. Therefore, analyzing AI texts based on corpus linguistics is highly relevant. This helps determine word choice, frequency of use, the application of phraseological units, and other statistically measurable indicators within the model. For example, how does the frequency of using conjunctions and introductory words like "*shu sababli*" (therefore), "*biroq*" (however), and "*shuningdek*" (also) differ between human and AI-generated texts in Uzbek? Such analyses yield precise quantitative and qualitative results.

A further relevant approach in studying AI texts is contrastive analysis. Through this method, Uzbek and English AI-generated texts are compared. Differences and similarities are identified regarding sentence structure, word order, tense forms, subordinate clauses, and the use of passive constructions. This reveals not only which language structure the AI model is more adapted to but also how AI tools can be used in the language learning process.

Additionally, the impact of AI models on language change is a crucial area of analysis. Every language is in a constant state of flux: new words enter, some become obsolete, and grammatical rules soften or change. AI tools operate on massive text corpora, and the language patterns they propagate are adopted by many, entering real-life communication through social networks, blogs, and articles. Thus, the influence of AI models on language evolution is a distinct area of scientific research for linguists.

In this regard, another pressing issue is the impact of AI-generated texts on linguistic diversity. Human-written texts are rich in various dialects, idiolects, regionalisms, and personal styles of expression. AI, however, is usually based on normative language. This may lead to the standardization and homogenization of content created via AI. For linguistics, this carries both positive and negative consequences. The positive aspect is the reinforcement of normative language, while the negative is the risk of losing the diversity and regional richness of languages.

Furthermore, the use of AI tools in language learning and education is a vital aspect. AI is expanding opportunities for exercises, written assignments, translation practice, and automatic analysis for language learners. However, attention must be paid to the methodological foundations of these processes. It is essential to determine which aspects of AI models are beneficial or potentially harmful for each stage of language acquisition. For instance, automatically suggesting complex structures to primary-level students may not align with their level of comprehension.

Another methodological problem in AI-based linguistic research is the issue of plagiarism. Analysis of numerous texts reveals that AI models sometimes take patterns from existing texts and reprocess them with minor changes. This complicates the issue of authorship in the scientific and creative process. Therefore, it is necessary to develop specific ethical and legal norms for AI-generated texts. Additionally, during semantic analysis, the logical consistency of AI texts and their relationship to linguistic phenomena such as antonymy, synonymy, and polysemy must be scrutinized. Human-written texts are often ambiguous and highly context-dependent. AI may not fully grasp these nuances, leading to more frequent semantic errors or artificial logical sequences. Identifying and comparing such cases is a vital task for linguists.

Based on the above, it can be concluded that the linguistic analysis of AI-generated texts is multi-layered and multi-dimensional, requiring approaches from syntactic, semantic, pragmatic,

stylistic, discursive, and methodological perspectives. These analyses not only reveal the linguistic capabilities of AI tools but also identify their limitations, methodological errors, and developmental prospects. Furthermore, new methods—such as semantic mapping based on neural networks, contextual analysis tools, and automatic discourse models—are entering linguistic research. With these tools, not only can existing texts be analyzed, but new linguistic theories can be proposed, and universal language features can be identified by comparing AI language models with human language.

The application of integrated education in organizing mother tongue lessons is a key trend in modern didactics, aimed at ensuring the complex development of students. This approach has specific pedagogical and psychological characteristics, which were studied during the research. Integration in mother tongue lessons refers not only to the interconnected teaching of various language aspects (reading, writing, grammar, speech development) but also to the integral connection of mother tongue lessons with other subjects (literature, history, natural sciences, visual arts, mathematics, etc.). The goal is to form a holistic, systemic, and real-world perception of knowledge in students.

In conclusion, organizing integrated education in primary school mother tongue lessons creates significant pedagogical and psychological opportunities for increasing educational efficiency, ensuring a holistic perception of the world, and developing the motivation and cognitive abilities of students. This approach serves to cultivate well-rounded and creative individuals who meet the demands of the XXI st century.

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