

THE BENEFITS AND LIMITATIONS OF AI-GENERATED LEARNING MATERIALS

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Abstract. *The article examines the benefits and limitations of AI-generated learning materials in education, with particular attention to English language teaching. It discusses personalization, material development, accuracy, bias, and the role of teachers in ensuring educational quality.*

Keywords: *artificial intelligence, AI-generated learning materials, English language teaching, personalized learning, educational technology, teacher mediation, digital literacy.*

Аннотация. *В статье рассматриваются преимущества и ограничения учебных материалов, созданных с помощью искусственного интеллекта, с особым вниманием к преподаванию английского языка. Анализируются возможности персонализации обучения, разработки учебных материалов, а также проблемы точности информации, предвзятости и роли преподавателя в обеспечении качества образования.*

Ключевые слова: *искусственный интеллект, учебные материалы, созданные с помощью искусственного интеллекта, преподавание английского языка, персонализированное обучение, образовательные технологии, роль преподавателя, цифровая грамотность.*

Annotatsiya. *Maqolada sun'iy intellekt yordamida yaratilgan o'quv materiallarining afzalliklari va cheklovlari, xususan, ingliz tilini o'qitishdagi ahamiyati ko'rib chiqiladi. Ta'limni individuallashtirish, o'quv materiallarini ishlab chiqish, ma'lumotlarning aniqligi, xolislik bilan bog'liq muammolar hamda ta'lim sifatini ta'minlashda o'qituvchining roli tahlil qilinadi.*

Kalit soʻzlar: *sunʼiy intellekt, sunʼiy intellekt yordamida yaratilgan oʻquv materiallari, ingliz tilini oʻqitish, individuallashtirilgan taʼlim, taʼlim texnologiyalari, oʻqituvchining vositachilik roli, raqamli savodxonlik.*

Introduction. The development of artificial intelligence has introduced new possibilities for preparing teaching materials, organizing classroom activities, and supporting independent learning. Generative artificial intelligence can produce reading passages, vocabulary exercises, grammar explanations, quizzes, dialogue models, and writing prompts in response to a teacher’s instructions. These materials can be created in different formats and adapted to particular learning objectives, making AI an increasingly relevant resource in language education. The use of AI-generated learning materials, however, raises questions about their accuracy, educational value, linguistic appropriateness, and reliability. A text may appear grammatically correct while containing inaccurate information. An exercise may be suitable for general English but fail to address the needs of a particular group of learners. Similarly, a reading passage written for beginners may include unfamiliar vocabulary or culturally inappropriate examples. The issue is therefore not simply whether artificial intelligence can produce educational content, but whether that content contributes to meaningful learning. UNESCO’s Guidance for Generative AI in Education and Research emphasizes the importance of human oversight, data protection, inclusion, and the pedagogical suitability of AI applications [1]. These considerations are especially important when teachers use automatically generated materials with learners whose language proficiency and educational needs differ considerably.

AI-generated learning materials are educational resources created wholly or partly with the assistance of artificial intelligence systems. They may include explanatory texts, reading passages, grammar exercises, vocabulary lists, dialogues, assessment questions, lesson plans, and multimedia learning content. Unlike conventional materials, which are generally prepared and revised by authors before publication, AI-generated resources can be produced in response to specific

instructions. A teacher can request a short reading text containing ten target words, a dialogue between two students, or a set of exercises designed for learners at a particular proficiency level. For example, an English teacher might enter the following instruction:

“Create a 150-word reading passage for A2-level learners about healthy habits. Include eight target vocabulary items and five comprehension questions. Use short sentences and familiar situations.”

The system may generate a passage, a vocabulary list, and questions within a short period. The teacher can then request a simpler version, additional comprehension tasks, or a translation of difficult words into Uzbek. This flexibility distinguishes AI-assisted preparation from the use of fixed textbook materials. Nevertheless, the resulting content should be regarded as a draft rather than a finished educational product. Its usefulness depends on the quality of the instructions, the capabilities of the system, and the teacher’s subsequent evaluation.

The distinction between content generation and pedagogical design is particularly important. Producing a large number of exercises does not necessarily create a coherent lesson. Effective materials must reflect learning objectives, the learners’ existing knowledge, the sequence of classroom activities, and the criteria by which progress will be assessed.

One of the principal advantages of AI-generated materials is the possibility of adapting content to different learner needs. In a typical language classroom, students may differ in vocabulary knowledge, grammatical accuracy, reading speed, and confidence in speaking. Preparing separate versions of every task can place considerable demands on teachers’ time.

AI tools can help teachers produce several versions of the same activity. For instance, a teacher preparing a lesson on environmental protection may request the following:

Beginner level - a short text with simple sentences and a glossary.

Intermediate level - a longer passage containing reasons, consequences, and examples.

Advanced level - an argumentative text requiring learners to evaluate environmental policies.

All three versions can address the same broad topic while differing in linguistic complexity and cognitive demand. This approach is consistent with the wider educational interest in adapting instruction to learners' needs. Holmes, Bialik, and Fadel [2] discuss the potential of artificial intelligence to support more personalized learning and to change how educational activities are designed. However, personalization should not be understood as automatically producing the best possible material for every learner. Teachers still need to determine whether the generated content is appropriate and whether the different versions lead towards comparable learning outcomes. Consider a vocabulary lesson on the topic of travel. Beginners might work with sentences such as *"The train arrives at nine o'clock."* Intermediate learners might analyse *"The train was delayed because of heavy traffic near the station."* Advanced learners could examine the difference between *"The journey was exhausting"* and *"The journey was demanding but rewarding."*

The materials can be adjusted to include simpler explanations, contextual clues, or more complex semantic distinctions. Such differentiation may help teachers respond to mixed-ability groups without preparing every exercise from the beginning. There is, however, a limitation. A system may label a text as B1 or B2 without accurately matching its vocabulary, grammar, idiomatic expressions, or conceptual complexity to that level. Teachers should therefore examine the generated text rather than relying exclusively on the level indicated in the prompt.

Preparing teaching materials involves several tasks: selecting texts, writing questions, developing examples, checking answers, and adapting content to the syllabus. AI-generated resources can reduce the time required for some of these activities. For example, a teacher working on the present perfect tense can request a set of sentences contrasting the present perfect with the past simple. The system may generate examples such as:

"I have visited London twice."

"I visited London in 2024."

The teacher can ask for additional examples, a short explanation, or a gap-filling exercise. This makes it possible to prepare supplementary activities when a textbook does not provide enough practice. AI can also assist in developing role-play situations. A lesson on customer service might include a dialogue between a hotel receptionist and a guest, followed by a task in which students exchange roles and solve a different problem. A business English class might use a simulated meeting in which participants discuss deadlines, negotiate responsibilities, and explain delays.

Kasneci et al. [3] discuss the educational opportunities and challenges associated with large language models, including their potential to generate educational content and support interaction. The authors also stress the importance of appropriate pedagogical strategies, critical evaluation, and human oversight. Time savings should not, however, be confused with the elimination of teachers' work. Checking the accuracy of an explanation, correcting an unsuitable example, aligning a task with the curriculum, and preparing learners to use the material all require professional judgement. In some cases, revising a poorly generated activity may take longer than preparing a simpler task independently. AI is most useful when it reduces repetitive preparation while leaving educational decisions in the hands of the teacher.

AI-generated learning materials can support communicative language teaching by providing situations in which learners use English to exchange information, express opinions, and solve problems.

Communicative language teaching emphasizes the development of communicative competence rather than the memorization of isolated grammatical rules. Hymes [4] introduced the concept of communicative competence to highlight that knowing a language involves more than grammatical knowledge; it also involves knowing how to use language appropriately in social contexts. This principle is relevant to AI-generated dialogues and role-play activities. A teacher may request a conversation between a student and a university administrator about changing a class schedule. The dialogue can include requests, explanations,

clarification questions, and polite disagreement.

For example:

Student - *"Would it be possible to change my seminar group?"*

Administrator - *"Could you explain why you need to change it?"*

Student - *"My current seminar overlaps with another compulsory class."*

The teacher can ask students to identify the expressions used to make a request politely, compare them with more direct alternatives, and practise similar conversations in pairs. AI can generate additional scenarios involving travel, academic discussions, job interviews, or everyday communication. This provides a wider range of contexts for practising vocabulary and communicative functions. Nevertheless, generated dialogues may sound unnatural or fail to reflect the social conventions of a particular culture. A grammatically correct sentence is not necessarily the most appropriate expression in every situation. For example, the degree of directness considered polite may vary according to the relationship between speakers, the setting, and cultural expectations. Teachers should therefore review not only grammar but also register, pragmatic meaning, and the social context of the interaction. This is particularly important for activities involving requests, apologies, disagreement, and professional communication.

A major limitation of generative AI is that fluent language does not guarantee factual accuracy. Systems may produce plausible-sounding explanations, incorrect examples, invented references, or contradictory answers. Such errors can be difficult for learners to recognise when they lack sufficient subject knowledge.

Bender et al. [5] examine the limitations of large language models and caution against assuming that fluent linguistic output necessarily demonstrates reliable understanding. Their analysis is relevant to educational material development because learners may interpret confidently written explanations as authoritative. Consider a teacher who asks an AI system to prepare a reading passage about the history of the English language. The generated text might present a simplified account of Old English, Middle English, and Modern English but incorrectly describe the influence of French following the Norman Conquest. If the

teacher distributes the passage without checking it, the mistake may become part of the learners' understanding. A similar problem can occur in grammar exercises. An AI system may generate a sentence and incorrectly label its grammatical structure, or provide an answer key that conflicts with the exercise. Even a small error can create confusion when students depend on the material for independent study. These risks are not limited to factual information. Linguistic accuracy also involves collocation, idiomatic usage, register, discourse coherence, and pragmatic appropriateness. A sentence may be grammatically possible but unusual in the context in which it appears. For example, the expression "strong rain" is understandable, but "heavy rain" is the more conventional collocation in standard English. An AI-generated vocabulary exercise may overlook such distinctions unless the material is carefully reviewed. Teachers should verify factual claims against reliable sources, consult established dictionaries and reference grammars, test answer keys, and read example sentences in context. Where the material concerns specialist knowledge, references and claims should be independently confirmed before classroom use.

Conclusion. AI-generated learning materials offer useful opportunities to expand teaching resources, adapt tasks to different proficiency levels, and reduce the time spent preparing routine exercises. In English language education, they can support vocabulary development, grammar practice, reading comprehension, dialogue construction, and communicative activities.

LIST OF USED LITERATURE

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