AI-SUPPORTED DEVELOPMENT OF STUDENTS’ COMMUNICATIVE COMPETENCE IN GENERAL SECONDARY EDUCATION: A METHODOLOGICAL APPROACH

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Annotatsiya. *Maqolada umumiy o‘rta ta’lim maktablari o‘quvchilarining kommunikativ kompetensiyasini rivojlantirishda sun’iy intellekt texnologiyalaridan foydalanishning metodik imkoniyatlari ko‘rib chiqiladi. Sun’iy intellektni oddiy til mashqi yoki matn yaratish vositasi sifatida emas, balki o‘qituvchi rahbarligidagi kommunikativ topshiriqlar, o‘quvchilararo muloqot, AI yordamidagi qayta aloqa, refleksiya va takroriy kommunikativ faoliyat bilan integratsiya qilgan holda qo‘llash zarurligi asoslanadi.*

Kalit so‘zlar: *sun’iy intellekt, kommunikativ kompetensiya, ingliz tili, EFL, umumiy o‘rta ta’lim, raqamli pedagogika, AI texnologiyalari.*

Аннотация.*В статье рассматриваются методические возможности использования технологий искусственного интеллекта для развития коммуникативной компетенции учащихся общеобразовательных школ. Обосновывается необходимость педагогически структурированного применения ИИ, объединяющего коммуникативные задания, взаимодействие учащихся, обратную связь, педагогическое сопровождение, рефлексию и повторное выполнение коммуникативных заданий.*

Ключевые слова: *искусственный интеллект, коммуникативная компетенция, английский язык, EFL, общеобразовательная школа, цифровая педагогика, ИИ в образовании.*

Abstract.*The rapid development of artificial intelligence (AI) is creating new opportunities for language education and is transforming traditional approaches to teaching and learning. In English as a Foreign Language (EFL) education, AI-supported tools can provide learners with opportunities for personalized practice, interactive communication, immediate feedback, and repeated language production. However, the educational value of artificial intelligence depends not only on the availability of technological tools but also on the pedagogical principles and methodological framework through which they are integrated into classroom practice. This article examines the methodological potential of artificial intelligence*

technologies for developing students’ communicative competence in general secondary education. The study analyses recent research on AI-assisted EFL learning and identifies a need for pedagogically structured approaches that move beyond the use of AI as a simple language practice or text-generation tool. A methodological model is proposed that integrates AI-supported communicative tasks, human interaction, AI-assisted feedback, teacher guidance, learner reflection, and repeated performance. The article argues that AI should function as a complementary pedagogical resource rather than a replacement for the teacher or authentic human communication.

Keywords: *artificial intelligence, generative AI, EFL, communicative competence, secondary education, language teaching, AI-supported learning, digital pedagogy.*

1. Introduction

The development of artificial intelligence has become one of the most significant technological changes affecting contemporary education. Generative AI systems, intelligent tutoring tools, automated feedback systems, and other AI-supported technologies have created new possibilities for personalized and interactive learning. In language education, these technologies are particularly significant because language acquisition requires continuous practice, meaningful interaction, feedback, and opportunities to use language in different communicative situations.

English as a Foreign Language (EFL) education has traditionally faced several challenges, including limited opportunities for authentic communication, insufficient individualized feedback, differences in learners’ proficiency levels, and restricted classroom time for speaking practice. Artificial intelligence may partially address these challenges by creating additional opportunities for learners to interact with digital conversational partners, receive feedback, practise vocabulary and grammar, and engage in simulated communicative situations.

Recent research provides increasing evidence of the potential of AI in EFL education. A 2025 meta-analysis synthesizing 23 experimental and quasi-experimental studies reported positive effects of AI-based interventions on several EFL outcomes, particularly writing accuracy, speaking fluency, motivation, engagement, and enjoyment. At the same time, the study identified substantial variation across technologies, learner profiles, and measurement approaches, indicating that the effectiveness of AI cannot be assumed to be uniform across educational contexts.

Recent systematic reviews also demonstrate that AI research in EFL has expanded considerably. However, much of the existing literature has focused on higher education, while comparatively less attention has been given to elementary and secondary school learners. This creates an important area for further investigation, particularly in relation to age-appropriate pedagogical models for school-based EFL instruction.

The present article therefore focuses on the methodological question of how AI technologies can be systematically integrated into EFL instruction to support the development of students’ communicative competence in general secondary education.

2. Literature Review

2.1. Communicative Competence in Foreign Language Education

Communicative competence is a multidimensional construct that includes learners’ ability to use language effectively and appropriately in different communicative contexts. In contemporary language education, communicative competence is generally associated with linguistic knowledge as well as sociolinguistic, pragmatic, discourse, and interactional abilities.

For secondary school learners, communicative competence can be conceptualized through several interconnected dimensions: linguistic competence; sociolinguistic competence; pragmatic competence; interactional competence; and fluency. Such a multidimensional understanding is important because AI-supported learning may improve certain linguistic aspects while not automatically developing all dimensions of communicative competence.

2.2. Artificial Intelligence in EFL Education

AI applications in language education include conversational chat-bots, automated writing evaluation, speech-recognition systems, adaptive learning platforms, intelligent tutoring systems, and generative AI tools.

Recent systematic reviews indicate that AI-supported tools have been used to improve integrated language skills, speaking, writing, and learner experience. However, the research base remains uneven, and many studies continue to focus on higher education.

Research specifically examining oral skills suggests that generative AI can support speaking practice, feedback, autonomy, confidence, and opportunities for additional language production. Nevertheless, authentic human interaction remains essential to communicative development.

These findings suggest that AI has considerable potential, but its effectiveness depends on how the technology is incorporated into the broader pedagogical process.

3. Research Gap

The literature demonstrates increasing interest in AI-assisted language learning, yet several research gaps remain. First, relatively fewer studies have focused specifically on general secondary education compared with higher education.

Second, existing research frequently investigates individual outcomes such as writing accuracy, speaking fluency, motivation, or vocabulary acquisition. Less attention has been given to a comprehensive methodological model targeting multiple dimensions of communicative competence simultaneously.

Third, there is a need to clarify the relationship between AI-supported practice and authentic human communication. If learners interact predominantly with AI systems, increased technological interaction does not necessarily mean increased real-world communicative competence.

Fourth, teacher mediation requires further attention. A human-centred approach requires pedagogical design, data protection, age appropriateness, and human agency.

Therefore, a significant research opportunity exists in developing a methodological framework in which AI-supported activities are systematically combined with teacher guidance, peer interaction, reflection, and authentic communicative tasks.

4. Aim of the Study

The aim of this study is to develop a methodological approach for using artificial intelligence technologies to support the development of students’ communicative competence in general secondary education. The study focuses particularly on the integration of AI-supported communicative practice, teacher-guided learning, authentic peer interaction, AI-assisted feedback, learner reflection, and repeated communicative performance.

5. Objectives of the Study

1. To analyse the pedagogical potential of AI technologies in secondary-school EFL education.

2. To clarify the relationship between AI-supported learning and communicative competence.

3. To identify methodological principles for integrating AI into communicative language teaching.

4. To develop a structured AI-supported communicative learning model.

5. To identify appropriate indicators for assessing students’ communicative competence.

6. To establish a methodological foundation for future experimental research.

6. Methodology

The present article employs a theoretical and methodological research approach based on the analysis and synthesis of recent scholarly literature on artificial intelligence, EFL education, communicative competence, and digital pedagogy.

The literature considered in the study includes recent systematic reviews, meta-analyses, methodological research, and international educational guidance. Particular attention is given to studies published between 2023 and 2026 because of the rapid development of generative AI during this period.

The methodological analysis focuses on five major dimensions: the role of AI in language practice; opportunities for communicative interaction; feedback and formative assessment; teacher mediation; and learner autonomy and reflection.

The proposed model is conceptual and should subsequently be tested through empirical research involving secondary school students.

7. Proposed AI-Supported Methodological Model

The central contribution of this article is the proposed AI-Supported Communicative Competence Development Model. The model consists of seven interconnected stages.

Stage 1: Preparation

The teacher introduces a real-life communicative situation and provides the necessary vocabulary, expressions, cultural information, and task objectives.

Stage 2: AI-Supported Practice

Students interact with an AI system through a structured task. The AI may simulate a job interviewer, tourist, customer, teacher, foreign student, or discussion partner.

Stage 3: Human Interaction

After individual AI-supported practice, students communicate with classmates. This stage is essential because authentic communication involves unpredictable responses, negotiation of meaning, turn-taking, clarification, and social interaction.

Stage 4: AI-Assisted Feedback

Students use AI to identify selected linguistic problems involving vocabulary, grammar, sentence construction, pronunciation, or fluency. Students should evaluate AI feedback critically.

Stage 5: Teacher Feedback

The teacher analyses students’ performance and provides pedagogical feedback, particularly on appropriateness, pragmatic meaning, interactional strategies, cultural sensitivity, and communicative purpose.

Stage 6: Reflection

Students reflect on their performance, identify successful strategies, evaluate AI feedback, and determine what they need to improve.

Stage 7: Re-performance

Students repeat or extend the communicative task after receiving feedback, creating a cycle of practice, interaction, feedback, reflection, and re-performance.

8. Role of the Teacher

The proposed approach positions the teacher as the central pedagogical mediator. The teacher is responsible for selecting appropriate AI tools, designing communicative tasks, establishing learning objectives, monitoring student interaction, evaluating AI-generated feedback, ensuring ethical and age-appropriate use, facilitating authentic human communication, and assessing learning outcomes.

AI should therefore function as a complementary pedagogical resource rather than a replacement for the teacher. This position is consistent with a human-centred approach to generative AI in education.

9. Assessment of Communicative Competence

To evaluate the effectiveness of the proposed methodology, communicative competence should be assessed through multiple indicators rather than a single language test.

A future experimental study could employ a pre-test/post-test design involving an experimental group receiving AI-supported instruction and a comparison group receiving conventional instruction. Actual statistical findings should only be reported after real data have been collected and analyzed.

10. Ethical and Pedagogical Considerations

The integration of AI into secondary education also raises important ethical questions. Students should be taught that AI-generated information may contain inaccuracies and should therefore be evaluated critically. They should also understand the importance of privacy, responsible use, academic integrity, and appropriate disclosure of AI assistance.

A responsible AI-supported language education model should follow several principles: human-centredness; pedagogical purpose; authentic communication; critical AI literacy; privacy and safety; equity; and age appropriateness.

11. Discussion

The reviewed literature suggests that artificial intelligence can provide valuable opportunities for language practice, personalized learning, feedback, and learner engagement. However, effectiveness depends on the learner population, educational context, technological tool, learning objective, duration of intervention, and assessment method.

The proposed model addresses this issue by positioning AI within a structured pedagogical sequence. Rather than asking students simply to use an AI tool, the teacher establishes a communicative objective, provides an interactional task, guides AI-supported practice, facilitates peer communication, and uses feedback and reflection to promote improvement.

The model also addresses a potential limitation of technology-mediated communication. Communication with an AI system may be useful for increasing practice opportunities, but it cannot fully reproduce the social, emotional, cultural, and unpredictable dimensions of human interaction. Consequently, AI should be considered a bridge towards authentic communication rather than its replacement.

Future research should therefore investigate not only whether students improve after using AI, but also which pedagogical conditions make AI-supported communication effective.

12. Conclusion

Artificial intelligence is creating new possibilities for foreign language education, particularly by increasing opportunities for personalized practice, interaction, feedback, and learner reflection. However, the educational value of AI depends fundamentally on the pedagogical framework within which it is used.

This article proposed an AI-Supported Communicative Competence Development Model for general secondary education. The model integrates AI-supported practice, authentic human interaction, AI-assisted feedback, teacher mediation, learner reflection, and repeated performance.

The proposed approach responds to several gaps in existing research, particularly the need for more systematic methodological approaches to AI-supported communicative competence development among school-age EFL learners.

Future empirical research should test the proposed model through controlled or quasi-experimental studies in secondary schools. Such studies could examine changes in students’ linguistic, sociolinguistic, pragmatic, interactional, and fluency-related competencies, as well as motivation, confidence, willingness to communicate, and learner autonomy.

Dimension	Possible indicators

Linguistic competence	Grammar, vocabulary, pronunciation
Fluency	Speech continuity, speed, hesitation
Sociolinguistic competence	Appropriate language for context
Pragmatic competence	Appropriate expression of intentions
Interactional competence	Turn-taking, clarification, response
Communication strategies	Repair, paraphrasing, asking for clarification
Confidence	Willingness to participate
Autonomy	Ability to use feedback independently

References

1. Ekizer, F. N. (2025). Exploring the impact of artificial intelligence on English language teaching: A meta-analysis. Acta Psychologica, 260, 105649. https://doi.org/10.1016/j.actpsy.2025.105649

2. López-Molines, L. (2025). A systematic review of generative artificial intelligence-based tools to improve oral skills in English as a Foreign Language. The EuroCALL Review. https://doi.org/10.4995/eurocall.2025.23941

3. Miao, F., & Holmes, W. (2023). Guidance for generative AI in education and research. UNESCO.

4. Saarela, M., Gunasekara, S., & Kumarage, P. (2026). A meta-analysis of generative AI effects on language proficiency and affective-cognitive outcomes in language learning. Discover Computing, 29, 116.

5. Uygun, E., & Demir, B. (2026). A PRISMA-based systematic review of artificial intelligence in English as a foreign and second language education (2023–2025). Discover Education, 5, 478. https://doi.org/10.1007/s44217-026-01504-y

6. Yuan, Z., Qiu, X., & Wang, J. (2026). A systematic research synthesis of generative AI literacy in English language education. Discover Artificial Intelligence, 6, 1074.

7. Artificial Intelligence in English as a Foreign Language Learning: A systematic review of technologies, tools, and their impacts. (2026). System.

8. Transforming EFL Teaching with AI: A Systematic Review of Empirical Studies. (2025). International Journal of Artificial Intelligence in Education, 35, 2281–2314.

9. Ekizer, F. N. (2025). Exploring the impact of artificial intelligence on English language teaching: A meta-analysis. Acta Psychologica, 260, 105649. https://doi.org/10.1016/j.actpsy.2025.105649

10. López-Molines, L. (2025). A systematic review of generative artificial intelligence-based tools to improve oral skills in English as a Foreign Language. The EuroCALL Review. https://doi.org/10.4995/eurocall.2025.23941

11. Miao, F., & Holmes, W. (2023). Guidance for generative AI in education and research. UNESCO.

12. Saarela, M., Gunasekara, S., & Kumarage, P. (2026). A meta-analysis of generative AI effects on language proficiency and affective-cognitive outcomes in language learning. Discover Computing, 29, 116.

13. Uygun, E., & Demir, B. (2026). A PRISMA-based systematic review of artificial intelligence in English as a foreign and second language education (2023–2025). Discover Education, 5, 478. https://doi.org/10.1007/s44217-026-01504-y

14. Yuan, Z., Qiu, X., & Wang, J. (2026). A systematic research synthesis of generative AI literacy in English language education. Discover Artificial Intelligence, 6, 1074.

15. Artificial Intelligence in English as a Foreign Language Learning: A systematic review of technologies, tools, and their impacts. (2026). System.

16. Transforming EFL Teaching with AI: A Systematic Review of Empirical Studies. (2025). International Journal of Artificial Intelligence in Education, 35, 2281–2314.