

The Efficacy of Dialogic AI-Based Products as Personal Tutors in Enhancing Student Learning Outcomes

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Received: December 10, 2025

Accepted: February 26, 2026

Online Published: March 4, 2026

doi:10.11114/jets.v14i3.8267

URL: <https://doi.org/10.11114/jets.v14i3.8267>

Abstract

The purpose of this study is to determine the advantages of artificial intelligence as personalized learning tools for students. The study utilized analytical and observational methods, the RAISE methodology, as well as analysis of variance and Student's t-test to determine the difference in perspectives between students and educators. Learning English was based on a combination of tools aimed at cultivating writing proficiency (Claude AI). Further, the enhancement of English competencies was achieved using the Write & Improve application. Conversational skills were developed using the Speak AI and Duolingo Max applications. It was determined that the value of these tools lies in the capacity for personalized learning ($Y_{ijk}=4.357$). Notably, the perspectives of students (Claude AI: 30%) and educators (Speak AI: 31%) divided in terms of the learning technologies' effectiveness, which is associated with improving the practical lessons. In the experimental group, the introduction of technology in English language learning considerably influenced the cultivation of the students' ability to analytical thinking (98%), which contributed to enhancing their writing and speaking skills. The lack of machine intelligence competencies enabled the students to improve short-term memory (83%), yet exerted a less profound impact on cultivating their communicative competencies. For the universities, the implementation of such technologies has practical significance, in particular for ensuring continuity in mastering the English language.

Keywords: communicative competencies, continuous support, educational ai, practical activity cognitive skills

1. Introduction

Artificial intelligence (AI) plays a groundbreaking role in shaping a new educational strategy and enhancing learning paradigms based on an automated methodology. AI facilitates the reduction of the load on both educators and students, thereby focusing on creative development. The utilization of this technology makes it possible to adjust the educational process, bolstering the students' motivation through continuous transformation approaches (Alasgarova et al., 2025).

Currently, AI-driven transformation of education, in particular with communication functions, is primarily associated with customizing educational approaches to individual learners, providing them with continuous support and uninterrupted interaction (Venter et al., 2024). On a global scale, this process affects the change in the educator's role as well as cultivating a consultative interaction with the student. Moreover, AI facilitates an automated management of the educational process, thereby enabling a real-time monitoring of the students' performance, the selection of educational tasks to enhance their knowledge, etc. (Capano et al., 2025). Therefore, the educational process takes into consideration not only pedagogical features, but also ethical and social dimensions. The aim of individual recommendations is to select tailored exercises for each student, thereby making

sure the teacher can choose an approach to bridge the gaps in learner's knowledge (Fulgencio, 2024).

In terms of learning management using AI, it can be based on adaptive learning systems designed to increase students' retention and comprehension of information based through the tracking progress, choosing individual programs to augment knowledge (Ghiasvand & Seyri, 2025). Further, the cognitive systems assist in regulating the load on students, focusing on the sequence of information assimilation, which is necessary for mitigating the psychological barriers (Semenets-Orlova et al., 2023). In addition, a common function of machine intelligence is the possibility to facilitate the additional information internalization through consulting function. The above systems aid in organizing the educational process in accordance to the established schedule. In this regard, it is imperative to underscore the accuracy of the data provided as well as assigned educational tasks, which can be oriented towards promoting the learners' independent approach to learning (Semenets-Orlova et al., 2022; Yuldashev et al., 2022).

A thorough examination of the theoretical materials on implementing digital tools in foreign language acquisition revealed significant positive transformations. However, in order to broaden the extant body of scholarly research, it is expedient to focus on exploring the appropriate methodologies of utilizing AI during practical and theoretical classes. The innovative contribution of this study is manifested in the utilizing AI to explore mechanisms for learning a foreign language, while taking into account digital assistants for customized learning. Our research hypothesis posits that integrating AI with the feedback function enables to enhance speech and cognitive skills, which is increases the learning quality as compared to the classical methodology. During the study, the following tasks were addressed:

- to undertake an analysis of AI tools, which are equipped with the feedback functionality, in terms of developing foreign language skills, namely focusing on English;
- to analyze the comparative advantages of Claude AI, Write & Improve, Speak AI, Duolingo Max for enhancing students' academic performance in English;
- to assess the progress of students in the control (CG) and experimental (EG) groups in terms of developing their written and speaking skills;
- to examine the cognitive outcomes achieved by the students of the experimental and control groups.

2. Literature Review

Li et al. (2025) maintain that drawing upon automatic analysis of knowledge and recommendations for its enhancement to achieve structured communication, AI can contribute to facilitating the dialogue between students and educators. Hence, the conditions for optimizing pedagogical approaches are established (Li et al., 2025). An expanded approach to exploring this issue is elaborated in the study of Wang et al. (2024). AI with feedback function empowers the learners to develop their independence in controlling their knowledge levels. This can allow students to select new mechanisms from those proposed for additional learning (Wang et al., 2024). According to Liu et al., the chatbots integrated into the learning process enhance its optimization owing to the user-friendly and simple functionality (Liu et al., 2024). A relevant example can be the Academically Productive Talk, which obtained positive emotional reactions through relying upon the development of critical thinking. As a matter of fact, the above mentioned chatbot assisted students in learning a language by engaging them into dialogic reading assignments and providing opportunities to enhance their speaking skills (Liu et al., 2024). Similar ideas are discussed by Montanucci and Peconi (2024), emphasizing the significance of digital technologies in language proficiency. Chatbots make it possible to create practical tasks for the development of language skills (Montanucci and Peconi, 2024). Fakour and Imani (2025) explore alternative ways of providing feedback in the learning environment. The implementation of ChatGPT to foster communication in the learning process proved to have more benefits for students than interacting solely with the teacher. However, teachers are able to create an emotionally supportive learning environment. Hence, the combination of AI and traditional pedagogical approaches contributes to the increase in academic achievement (Fakour and Imani, 2025).

The interdisciplinary benefits of AI are outlined in the studies as follow in this section. Within the educational framework, the model of technology adoption depends on the compatibility of its capabilities with academic assignments as well as the system complexity. In the educational process, the principal task of AI is the need to foster learning experience and to enhance their creative development (Ilic et al., 2024). Owing to AI, it has become possible to customize the learning trajectories for each individual learner (Ramirez-Montoya et al., 2024). Furthermore, AI can assist in receiving immediate feedback by all students predicated on the advanced analytical functions. Clair technology offers a communication platform for students to engage, thereby fostering the exchange of ideas and deepening their understanding of educational concepts (de Araujo et al., 2025).

In the article by Zhao et al. (2024), the authors examined the role of AI in language learning. The underlying factor in the above researchers' analysis is activating cognitive skills to understand texts in a foreign language (Zhao et al., 2024). Similarly, Maheshi et al. (2024) investigate the comparable perspectives. The utilization of Learning Analytics enabled the learners to learn materials through active participation. Such an approach instills the formation of cognitive, emotional, and relational skills (Maheshi et al., 2024).

Therefore, the review of scientific publications showed that they predominantly focus on assessing the major advantages of introducing AI into the educational process. However, the issue of implementing specifically dialogic AI for instruction in certain disciplines are insufficiently studied. The imperative to consider these matters affects targeted and detailed research.

3. Methods and Materials

3.1 Study Procedure

At the first stage, the study integrated AI for learning English from a foreign language perspective. During this stage, learning English language was predicated on a combination of practical assignments with theoretical lectures. There were 4 classes per week for 40 minutes, which involved the interaction of teachers and digital tools during learning. 75% of the time, students used dialogic artificial assistants, which were controlled by teachers. Thus, the teacher provided feedback, controlled the process of using the applications, and their compliance with the learning conditions. Hint strategies were regulated by appropriate requests. The process of using the additives was associated with the performance of exercises selected by teachers, taking into account the possibility of using alternative vocabulary. Within the framework of the study, feedback was considered as a tool for providing students with information about the results of completed tasks, which included assessing their own progress. Personalized learning is an educational approach that allows you to adhere to a certain pace and content of learning in accordance with the capabilities of each student, analyzing the appropriate level of preparation.

At the second stage, the advantages of feedback technologies for cultivating the practical skills were considered. To this end, the effectiveness of Claude AI, Write & Improve, Speak AI, Duolingo Max was separately evaluated, based on both students' and teachers' opinions. The third stage of the study included ascertaining the effectiveness of the learning process on student performance when utilizing dialogic AI-based products. Furthermore, an evaluation of the intellectual activity outcomes was conducted among students in the control and experimental groups.

3.2 Sample Formation

The study engaged first-year students from the Interregional Academy of Personnel Management and the State University of Trade and Economics, the Bohdan Khmelnytskyi Cherkasy National University, and the National University "Ostroh Academy". The total number of students was 230, which was distributed 115 people each for the CG and EG. In total, 250 people were expected to participate in the study, but one group of students was excluded because they did not meet the required criteria. The distribution of students into groups was uniform, which precluded different performance indicators based on their sample. The sampling was conducted among first-year students, since regardless of specialization, the curriculum provided for the study of English. This allowed for the creation of equal conditions for participation in research for all students based on the specification of a particular subject. After distributing the respondents, a quasi-experimental study was performed, which involved using different approaches to student learning. For CG students, training was conducted according to the traditional system without the use of AI. EG students used dialogic AI-based products as personal tutors in the learning process (Claude AI, Write & Improve, Speak AI, Duolingo Max). The study was conducted with the written consent of all participants, and formal approval was secured from the administration of the respective educational institutions. The research spanned a duration of three months (October - December 2024), conducted under the direct oversight of the authors of this article.

3.3 Methods

- the analysis method was utilized to select appropriate technologies for learning English language. The use of this method made it possible to identify the advantages and downsides associated with than 50 AI-based technologies. Thus, it facilitated conducting English classes utilizing Claude AI, Write & Improve, Speak AI, and Duolingo Max.

- the observation method enabled us to ascertain the merits of dialogic AI-based products in facilitating the educational process, which involved evaluating the efficacy of addressing educational tasks through the integration of AI. The assessment of the dialogic AI-based products' benefits was carried out by ten educators who participated in the instruction. This facilitated the computations for a two-factor analysis of variance (Ghiasvand, and Seyri, 2025). This analysis provides an evaluation of the independent variables' influence (in our case, AI products) on the dependent variable (the learning process):

$$Y_{ijk} = \mu + \alpha_i + \beta_j + (\alpha\beta)_{ij} + \varepsilon_{ijk} \quad (1)$$

μ – average value;

α_i, β_j – effects of the i-th and j-th levels of influence;

ε_{ijk} – error.

- the method of comparing the teachers' and students' results was used to assess the effectiveness of individual dialogic AI-based products. This involved the use of a Likert scale, on the basis of which Student's coefficient calculations were made for independent samples (Mouta et al., 2025). The coefficient was also used to determine student performance. The student performance assessment included an assessment of writing skills and speaking skills, focusing on pre- and post-study results.

$$t = \frac{M_1 - M_2}{\sqrt{m_1^2 + m_2^2}} \quad (2)$$

M_1, M_2 – theoretical average values;

m_1^2, m_2^2 – dispersion indicators.

- the assessment of students' cognitive skills involved the use of the critical thinking method "RAISE" (Xiaoyu et al., 2025). The methodology provides for students' solving the tasks based on qualitative analysis, problem recognition, information evaluation, and knowledge synthesis. For example, teachers assessed the level of students' memorization of new words, conducting text analytics, discussions, and solving written tasks. Using the results obtained from teachers, based on the use of the RAISE critical thinking method, the percentage of students who were able to achieve the development of a particular cognitive skill was determined.

The RAISE critical thinking methodology is focused on assessing cognitive skills through analytical and reasoned approaches. Cognitive skills were assessed according to the methodology by identifying key aspects for assessment, establishing cause-and-effect relationships between students' results and the formation of cognitive skills, and providing reasoned conclusions based on specific student results. The assessment criteria included the completeness of the assessment of students' knowledge of English; students' ability to establish cause-and-effect relationships, and the ability to analyze presented materials and texts. The analysis criteria included the number of errors made by students during the performance of tasks; providing arguments during the performance of tasks, awareness of alternative points of view, and the ability to make independent decisions. According to the methodology, three levels of assessment were identified. Analytical thinking was formed on the basis of the students' developed skills to perceive information holistically and divide it into parts, justify their own decisions, and choose the most optimal option for solving problems. The development of long-term memory was assessed through the ability to reproduce the learned information in a month, use it to solve new problems, logically group and reproduce information, rules. Short-term memory with the ability to memorize information in a short period of time and consciously repeat it when solving problems. The development of attention is associated with the ability to concentrate attention by distributing it, the ability to concentrate on individual tasks. The initial level of cognitive knowledge included partial recognition of tasks, conducting superficial analysis, and the absence of critical evaluation (from 1 to 5 points). The average level reflected the ability of students to determine the scope of tasks and conduct partial logical analysis. Solving problems is associated with making mistakes, taking into account weak self-reflection (from 6 to 10 points). A high level of cognitive skills in students allows them to clearly identify the problems posed, conduct a reasoned analysis, use alternative methods to solve problems, focusing on reasoned approaches (11-15 points). The reliability of the RAISE method has been confirmed experimentally by testing it with different groups of students since its development. Reliable results during our study were identified using repeated measurements, which were carried out every week in the final month of the study. The process allowed us to establish a high level of correlation between the results of students ($r = 0.81$), which confirms its reliability for determining the level of development of cognitive skills.

3.4 Tools

The Likert scale was used to collect data from students and teachers regarding the effectiveness of providing personalized feedback using the AI-based products. The development of writing skills involved the use of the Claude AI chatbot, which provides the ability to present feedback through a logically structured dialogue. Using Claude AI contributed to the deeper understanding of theoretical materials as a result of working through the rules using the examples presented.

To address the individual tasks, the Write & Improve application was used, which provided systematic prompting to students. Speak AI was focused on correcting pronunciation while using feedback on conversational skills in the form of audio responses. Further, Duolingo Max was used by the students in order to promote the development of communicative competences. The process was predicated on the elaborated dialogues, which were automatically corrected when errors took place. The technologies' effectiveness was tested on a Likert scale (0-4 points). The use of the Likert scale to assess the benefits of dialogic artificial intelligence in the educational process included a 4-point assessment, which allowed determining the average score for the indicator, taking into account the responses of all respondents. Internal consistency included the calculation of Cronbach's alpha, which was equal to 0.82, which reflected the internal reliability of the presented results. The consistency of the presented results reflects the correctness of the chosen approach. The data collection tool was Google Forms, which provided a structured approach for further results processing. The STATA program ensured convenience in conducting mathematical calculations.

To develop writing skills using the Claude AI chatbot, the Sonnet 2 version was used, which provided a balanced opportunity to use the specified exercises. During the learning process, paid access to the chatbot was used, which did not contribute to restrictions in use. Data confidentiality was maintained on the basis of ensuring the privacy of access.

The Write & Improve application was used without access during the study, which included the ability to use the CEFR version. Free access to the application fully met the requirements of training and provided the ability not only to improve writing skills, but also to receive automatic feedback. Data confidentiality during the use of the application was maintained

in compliance with academic standards that comply with the University of Cambridge policy. The data is stored in the personal account of each student, which allows for academic analysis.

The Speak AI platform, version 4.32.0, provided for the correction of pronunciation by students, taking into account adaptation to educational topics, taking into account the tone of pronunciation. Paid access was provided for the ability to use the full functions of the platform. Paid access facilitated data analytics. Data confidentiality was maintained based on limiting access to information to third parties, which is controlled by the platform policy, ensuring data encryption. Information was stored on the platform only with the user's consent, but excluded access to information by third parties.

The development of conversational skills included the use of the Duolingo Max version, which provided access not only to all exercises, but also to the functions of the GPT-4 artificial intelligence. The built-in artificial intelligence function facilitated the use of role-playing dialogues, games, which expanded students' communicative skills. The Duolingo Max version contributed to the expansion of language practices, intellectual explanations. Confidential data was maintained by the program policy, which provided data collection only from the user's account to ensure personalization of learning.

3.5 Institutional Approvals and Risk Management

The integration of the technologies used in the educational process within the framework of the study became possible due to the conduct of classes in a trial group of 10 people. This made it possible to assess the correctness of the implementation of digital tools in the educational process and possible difficulties in their use. Compliance with confidential information from students became possible due to the systematic verification of privacy settings.

The registration process in the system included specifying names and e-mails, which excluded the use of personal documents. Risk mitigation was regulated by checking answers through textbooks, since the technologies used were an auxiliary learning tool. Exclusion of dependence on the use of technologies included their use only for certain types of tasks. Equal access to tools was provided for respondents, including access to paid versions.

4. Results

Following the training course completion, the study envisaged to assess the benefits of feedback in corresponding technologies which were equipped accordingly. Examples of studies were as follows: Claude AI, Write & Improve, Speak AI, Duolingo Max. The results are presented in Table 1

Table 1. Analysis of the dialogic technologies' effectiveness within the learning environment

Advantages	%	Two-way analysis of variance		
		$(\alpha\beta)_{ij}$	df	Y_{ijk}
Personalized learning approach	29	0,936	1	4,357
Perception efficiency of educational materials	27	0,928	1	4,339
Quality of educational materials	23	0,883	1	4,218
Accessibility in usage	22	0,0882	1	4,215

Source: Developed by the authors

The findings showed that AI contributed to managing the educational processes, the cultivation of language skills, as well as students' independent organization of educational activities. Accordingly, this contributed to adjusting the training content, the appropriate pace, and the form of training. The efficacy of engaging with educational materials is intrinsically linked to the capacity to elucidate the content through diverse modalities, the selection of relevant tasks, and the meticulous reproduction of personalized directives for rectifying one's own comprehension.

Furthermore, the advantages of dialogic AI-based products include accessibility in usage as well as quality of educational materials. Accessibility was related to providing quick access to educational materials and the ease of use. This was reflected in the search for the necessary information and the ability to manage it.

The study assessed the effectiveness of a specific technology for obtaining feedback based on dialogic AI-based products. The evaluation was conducted by students and teachers, which allowed for a comparison of different opinions. The results are presented in Table 2.

Table 2. Evaluating the effectiveness of dialogic AI-based products to provide personalized communication

Skills acquired	Students			Teachers			Student's t-test (tabular value: 2,920)
	Percentage value	Mean	SD	Percentage value	Mean	SD	
Claude AI	30	0,741	0,072	22	0,661	0,060	1,854
Write & Improve	20	0,658	0,050	18	0,652	0,045	1,802
Speak AI	29	0,736	0,068	31	0,743	0,075	1,855
Duolingo Max	21	0,659	0,051	29	0,737	0,037	1,815

Source: Developed by the authors

It was found that teachers give the greatest preference to the Speak AI and Duolingo Max apps. For students, the most effective in obtaining feedback were Claude AI and Speak AI technologies. Teachers gave preference to applications that provided practical classes. Because their use allowed to improve the quality of speaking. For example, Speak AI allowed for audio responses, which affected the clarity of pronunciation. The Duolingo Max app also helped improve language practice, which increased students' motivation to learn. Feedback was associated with providing a detailed explanation of the mistakes made, which influenced the expansion of vocabulary.

For the students to gain quality communication through personalized advice, the most important technology was Claude AI. In this regard, maintaining the context of discussions in the learning process impacted the processing of written assignments and improved writing skills. In addition, utilizing Write & Improve facilitated quality interaction, although the basis for using the application were basic writing skills.

The assessment of students' performance was carried out through scrutinizing the level of students' cultivated knowledge. The examination was conducted among students of the experimental and control groups. The principal generalized results are presented in Table 3.

Table 3. Analysis of learning efficacy based on the results of CG and EG students

Skills acquired	CG			EG			Student's t-test (tabular value: 2,920)
	Average score*	Mean	SD	Percentage value	Mean	SD	
Before the training							
Writing skills	3,5	0,441	0,038	3,4	0,437	0,034	1,849
Speaking skills	3,7	0,452	0,045	3,8	0,453	0,047	1,845
After the training							
Writing skills	4,3	0,686	0,059	4,8	0,862	0,083	2,953
Speaking skills	4,1	0,682	0,057	4,9	0,871	0,085	2,961

*maximum score is 5

Source: Developed by the authors

The results of juxtaposing the CG and EG students revealed certain identical skills prior to learning and differences after completing the study. The use of AI with the communication function encouraged the students to engage in performative activity. For instance, it was manifested in their cultivation of social interaction skills. Also, the EG students demonstrated a higher level of speaking, which can be linked to using Speak AI, Duolingo Max. The clarity of speech was affected by developing the speaking skills through dialogues. In addition, EG students were also capable of achieving better writing skills, which was reflected in expanded vocabulary, coherent text composition.

The study encompassed the issues of assessing cognitive skills cultivated under the influence of the specifically designed educational process. Long-term and short-term memory, attention development, analytical thinking skills were assessed. The results are presented in Figure 1.

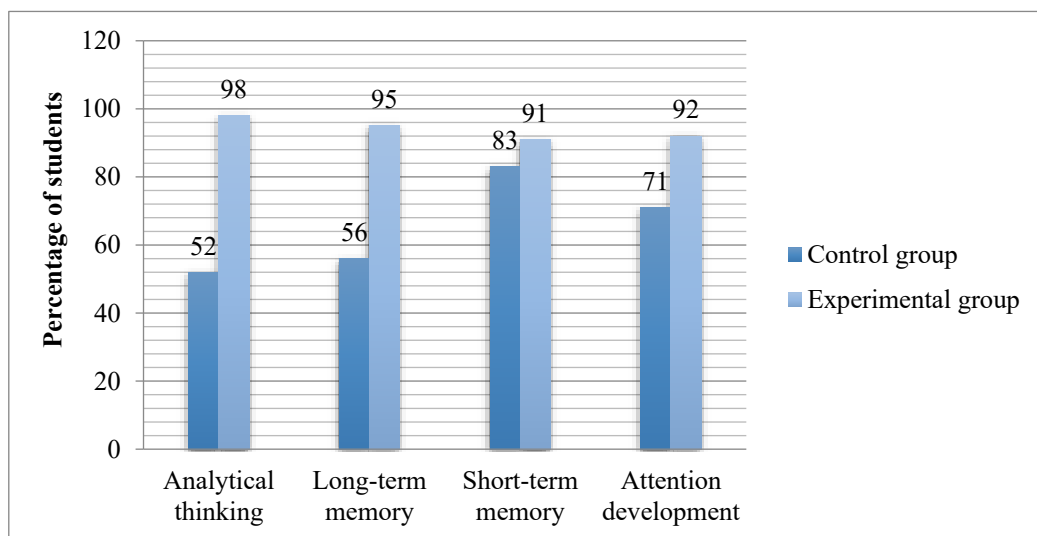


Figure 1. Percentage Of Students Who Developed Their Cognitive Skills

Source: Developed by the authors

CG students were most able to develop short-term memory. This was related to memorizing rules or foreign words, but for a limited period of time, which could not be reproduced in the next lesson. Notably, EG students cultivated analytical thinking, enabling them to employ foreign phrases with greater clarity and to comprehend educational materials and texts more effectively. Based on the development of long-term memory, it became possible to use the acquired knowledge for a long time, which affected the accuracy of reproducing language structures and understanding grammar. Thus, based on their developed attention, EG students were able to focus on completing the task. Obtaining high percentage values is associated with a wide range of cognitive skill development levels within the definition of a single level. Figure 1 shows the development of cognitive skills in students at an above-average level (obtaining 9-15 and above), which contributes to the ability of students to fully complete tasks.

5. Discussion

ChatGPT and GPT-4 technologies have the potential to transform the educational approach. Technologies can be used for interdisciplinary learning, which helps facilitate feedback in the educational process. Systematic learning is achieved based on the formation of a unified terminology and learning procedure (Bauer et al., 2023). ChatGPT can facilitate deep learning based on generating human text responses based on given criteria, which influences the feedback received. ChatGPT also can be employed to address challenges across various academic disciplines, thereby enhancing the progress of the learning experience (Chaudhry et al., 2023). ChatGPT promotes the comprehension of intricate concepts, acquire foreign languages, enhance writing skills, and engage in meaningful interactions with students. However, the primary objective of ChatGPT is related to searching for the mechanisms for structuring the educational process and engaging with methodological materials (Namoun, et al., 2024). The published scholarly works delved into the role of ChatGPT for knowledge development across various subjects. As far as the framework of our study is concerned, it is delineated by a specific perspective, namely the possibility of learning a foreign language utilizing the artificial intelligence tools.

Implementation of AI streamlines the educational process, facilitating students' involvement, cultivation of skills aimed at independent perception of educational resources, and understanding the read material. The use of technology contributed not only to improving students' outcomes, but also to strengthening the attention focus as well as consolidating the motivational aspects (Shafiee Rad, 2025). The advantages of GenAI are supported by the possibility of interaction through text as well as audio and visual methods (Bearman et al., 2024). In this context, our research is aimed at considering the said issues, although, the detailed character of the work is related to the possibility of forming English language skills utilizing AI methods. The advantages of the Generative Pretrained Transformer-3 model are due to the possibility of increasing the knowledge level and enhancing communication. The model provides processing of large information volumes to achieve the best educational approaches for students with different knowledge levels (Álvarez-Álvarez & Falcon, 2023). The use of generative AI encourages the development of critical literacy and fosters deeper assimilation of knowledge. The incorporation of AI into the educational system should be implemented in accordance with the principles of ethics, fairness, and prioritization of educational goals (Rudolph et al., 2024). The published studies focus on improving academic performance, critical literacy, and communication competencies. Our work strives to reflect the comprehensive nature of this research. This stance was obtained by assessing the level of students' written and spoken skills and taking into account cognitive outcomes.

Using ChatGPT, Dall-E, and Midjourney allows the educator to augment experimental learning sessions, expanding knowledge by translating or analyzing theoretical tools (Galindo-Domínguez et al., 2023). GenAI can facilitate language and science learning based on a multimodal approach. This provides for the creation of constructive analysis and rethinking of methods of information perception (Tang, 2024). Using ChatGPT presents a valuable opportunity for generating insightful feedback throughout the learning process. Moreover, ChatGPT promotes the development of academic writing skills and the expansion of conversational competencies (Mahapatra, 2024). The choice of general technologies for learning in published works does not contribute to determining their advantages compared to specialized technologies, which was examined in detail in our study.

Based on a discussion of scientific articles, it was found that AI is most commonly used in the educational process for personalized feedback. The analyzed AI-based products are not tied to specific academic programs. Our research focused on the use of dialogic AI for learning English as a foreign language (Claude AI, Write & Improve, Speak AI, Duolingo Max). The study also included an analysis of the selected technologies' benefits for the educational process, obtaining personalized communication. The level of student performance and cognitive outcomes obtained were also determined. The findings are entirely congruent with the stated research hypothesis, which pertains to the enhancement of student outcomes. The practical use of the results obtained can be aimed at improving the system of learning a foreign language, expanding the mechanisms of delivering and perceiving information. Thus, dialogic AI-based products can be used as an additional educational tool that contributes to the development of student independence.

5.1 Limitation

One of the study limitations pertains to the sample, which comprises only first-year students. In future studies, expanding

the sample is expedient as it will help to determine the effectiveness of digital tools equipped with the function of feedback for foreign language learning. The division of students into two groups (control and experimental) ensured assessing the impact of interactive learning on knowledge acquisition as compared to traditional pedagogical approaches.

5.2 Recommendations

Using the dialogic tools enables students to cultivate the ability of perceive and analyze their own errors. Facilitating personalized learning on their basis can significantly contribute to the targeted development of the learner's knowledge. What is more, the use of dialogic systems simultaneously enhances cognitive skills.

6. Conclusions

The significance of the study is due to the use of alternative methods in the process of foreign language acquisition. The specification of AI tools (Claude AI, Write & Improve, Speak AI, Duolingo Max) in our study had the goal to obtain theoretical and practical knowledge in a foreign language. The study delved into determining the overall advantages of the selected technologies for the learning process as well as the possibility of refining students' performance utilizing the specialized feedback. The results confirmed that 30% of students evaluated Claude AI technology as the most promising, since feedback is obtained through in-depth resources analysis. As for the educators, they chose Speak AI (31%), which is associated with the use of gamified forms for receiving feedback. That being said. Having determined the students' performance and cognitive results obtained, it was possible to confirm the hypothesis of the study. The development of speaking skills at the level of 4.9 points and writing skills at 4.8 points was registered.

The practical orientation of the findings makes it possible to broaden the understanding of approaches to learning a foreign language using the selected dialogic AI platforms. Their choice can ensure students' elevated independence and self-reliance, thereby contributing to achieving proficiency among both students and teachers. Future research endeavors will be aimed at exploring the avenues to increase the performance of students with basic as well as those with advanced knowledge.

Acknowledgments

Not applicable.

Author contributions

Dmytro Kyslenko and Viktoriia Bielova were responsible for study design and revising. Maksym Karpovets was responsible for data collection. Inna Nahrybelna drafted the manuscript and Kostiantyn Dieiev revised it. All authors read and approved the final manuscript.

Funding

Not applicable.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Redfame Publishing.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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