THE IMPACT OF AI TOOLS ON EFL LEARNERS' LANGUAGE ACQUISITION

(on the example of YSU Faculty of International Relations)

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Abstract: *The use of artificial intelligence (AI) in language education has the potential to revolutionize how EFL (English as a Foreign Language) learners develop language skills. This study examines the effect of AI-driven tools on the language achievements of EFL learners, specifically within content-based classrooms. Tools like ChatGPT, Google Translate, Canva and others offer instant, tailored feedback across different language subskills such as vocabulary, grammar, and writing. The research employs a mixed-methods approach, comprising qualitative insights to assess how these tools influence language proficiency, self-regulated learning behaviors, and learner motivation. The results are anticipated to show how AI tools can lead to significant improvements in language proficiency, strengthen specific language skills, and promote self-regulation by providing actionable feedback that encourages independent learning. The study also aims to add empirical evidence to the expanding research on AI's role in education, particularly in content-based language learning, and highlight the potential of AI tools to offer personalized learning experiences, boost learner engagement, and address gaps in language acquisition.*

Keywords: *artificial intelligence, language proficiency, AI tools, mixed-methods research, EFL (English as a Foreign Language), EFL learners*

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Introduction

The rise and rapid progress of artificial intelligence (AI) has significantly influenced a number of aspects of human life and has led to transformative shifts in multiple domains, particularly the field of education and language learning (Balyen and Peto, 2019; Chen et al., 2020; Spiro et al., 2017). The integration of technology in education modifies learning practices and knowledge acquisition. In computer programs, AI, as a branch of computer science, is developed to render and respond to inquiries, functioning as a platform based on human intelligence to deliver relevant information (Devi et al., 2022; Nemorin et al., 2023). Incorporation of AI into education has raised substantial attention from scholars and researchers, educators and policymakers alike. Among the IT programs, AI is considered a promising tool used in language learning to improve learners' language performance (Haristiani, 2019; Pikhart, 2020). AI has created new opportunities to enhance educational practices and student achievements through its ability to process large volumes of data, identify intricate patterns, and provide personalized insights (Roll and Wyle, 2016). The integration of AI-driven language learning tools into education has demonstrated considerable benefits and has helped learners in improving their language skills (Tafazoli et al., 2019).

By providing convenient access AI-powered language learning tools allow students to easily engage in language tasks, and improve their overall language proficiency. AI-enabled tools are intended to assess the language materials and offer feedback on many aspects of the language, such as grammar, vocabulary, syntax, content, and structure (Hosseini et al., 2023; Strobl et al., 2019). The assessment of the material, feedback on the language and the analysis of the language in general help learners improve and refine their language skills. A wide variety of AI tools applications, which assist the learners in text-translation, text summarization, text rewriting, text analysis, and spelling, provide suggestions for modifying and improving texts within seconds. For instance, ChatGPT, an AI-powered tool which interacts naturally with users in a responsive way, can provide language learners with the essential information and comments across various language skills, thus contributing to their language proficiency development. The use of this tool by language learners can possess benefits in terms of enhancing not only their core language skills but also specific subskills (Hong, 2023). It helps learners generate new ideas, refines sentence structures to improve their writing quality by identifying and correcting language errors, whether grammatical or lexical, thus contributing to their language learning success (Yan, 2023). It is also able to suggest grammatically correct and coherent sentences helping learners construct orderly texts and provides the optimal answers. Furthermore, it can

function as a writing assistant, improving learners' vocabulary and grammar in their writing outputs, as well as assisting with drafting revisions.

A wide array of research studies has investigated how of AI-powered language learning tools influence language learners' general language achievements along with specific language skills and subskills, revealing their positive contribution to learners' achievement (Zheng et al., 2021). The aim of a study by Hsu et al. (2023) was to find out how AI-powered tools influence learners' vocabulary, and the findings demonstrated that learners using AI tools showed vocabulary gains and outperformance in vocabulary knowledge. Furthermore, the application of AI tools was found not only to enhance the learners' vocabulary acquisition, but also to help reduce their language learning anxiety. Similarly, Schmidt-Fajlik (2023) found that ChatGPT effectively detected and enhanced English grammar. Focusing on writing skills, Yan (2023) found that AI-assisted tools significantly improved EFL learners' writing performance and considerably facilitated the completion of their written tasks. Moreover, AI tools proved to help the students' academic research writing by offering alternative sentences and phrase options, crucial suggestions, immediate feedback and comments (Utami et al., 2023). They are efficient in detecting linguistic errors, inspiring new ideas, summarizing information, facilitating translation, improving readability, identifying plagiarism, and increasing motivation. This body of research demonstrates that AI-assisted tools have a considerable impact on various language skills and highlights their effectiveness in improving vocabulary, grammar, and writing performance.

The Aim of the Study

The developments in artificial intelligence (AI) have dramatically altered the field of education, particularly in language learning. A key area of research is exploring how AI-powered tools can improve the language learning outcomes of learners studying English as a Foreign Language (EFL). Despite the potential of AI in educational contexts, there remains a gap in understanding its impact on EFL learners, particularly within content-based classrooms (Balyen & Peto, 2019). This article aims to address this gap by emphasizing the significance of investigating AI-assisted language learning tools and their influence on the language development and self-regulated learning of EFL learners.

AI-powered tools offer a distinct opportunity to tackle the challenges faced by EFL learners. AI-powered tools offer language learners immediate feedback in areas such as vocabulary and grammar, helping learners improve their language skills effectively (Hosseini et al., 2023; Tafazoli et al., 2019). Investigating the

impact of AI in these areas, particularly within content-based classrooms, is essential for evaluating their effectiveness as educational tools. The goal of this research is to provide empirical evidence to the growing body of literature on AI in education, with a particular focus on EFL learners. By studying how AI tools influence language learning outcomes, we can gain a deeper understanding of how these technologies can enhance language proficiency and foster self-regulated learning behaviors in students.

AI tools can be particularly effective in content-based classrooms by delivering subject-specific content alongside language learning, helping students improve both language proficiency and subject matter knowledge (Strobl et al., 2019).

Language learning is a complex and labor-intensive process that involves multiple skills, including reading, writing, speaking, and listening. For EFL learners, acquiring language skills can be especially difficult, often requiring customized teaching methods that cater to the unique needs of each student. Content-based instruction (CBI), which combines language learning with subject-specific content, is a highly effective teaching strategy in many classrooms. However, conventional teaching methods may be insufficient in addressing the diverse proficiency levels, motivations, and learning strategies of different learners.

The primary aim of this paper is to study the specific effects of AI-assisted language learning tools on EFL learners' achievements in content-based classrooms. This investigation is essential for a number of reasons:

1. *Empirical Evidence*. Although there is a wealth of scientific research on AI in general education and language learning, there is a distinct lack of studies that specifically focus on EFL learners using AI tools in content-based classrooms (Haristiani, 2019; Hosseini et al., 2023; Pikhart, 2020; Roll & Wylie, 2016). This study aims to fill this gap by providing empirical data on the effectiveness of AI tools for improving language proficiency in this context.

2. *Focused Scope on EFL Learners*. EFL learners face unique challenges, such as limited exposure to the target language, cultural barriers, and differing levels of motivation (Chen et al., 2020; Haristiani, 2019). By narrowing the study to this specific group, the research can provide insights into how AI tools can address these challenges in a way that aligns with EFL learners' needs (Pikhart, 2020; Tafazoli et al., 2019). This targeted approach ensures that the findings are relevant and applicable to educators working with EFL students.

3. *Focus on Language Development and Self-Regulated Learning*. A key aspect of the study is its focus on two important areas: language development and self-regulated learning. AI tools are particularly well-suited to support self-

regulation, as they provide learners with immediate feedback and encourage autonomous learning. Self-regulated learning refers to the ability of learners to plan, monitor, and evaluate their own learning process, a crucial skill for language acquisition. By investigating how AI tools foster self-regulation, the study can offer valuable insights into the long-term benefits of AI-assisted learning in language development (Devi et al., 2022; Haristiani, 2019; Pikhart, 2020; Roll & Wylie, 2016).

Methodology

The current study seeks to explore the influence of AI-powered tools on the language achievement of EFL learners in content-based classrooms with the aim of revealing their perceptions and practices in using AI tools to improve their language skills. The research employs a mixed-methods approach, particularly qualitative data (e.g., questionnaires, learner interviews, open-ended survey responses) to gain a deeper understanding of how AI tools impact language proficiency, how learners interact with AI tools, their perceptions of these tools, and the specific ways in which AI affects their learning behaviors. Data from interviews, surveys, and observations provide insights into learners' perceptions and experiences with AI tools, their motivation and attitudes toward language learning.

The study was conducted at Yerevan State University, the Faculty of International Relations, involving a group of EFL learners, all enrolled in content-based classrooms where English is taught alongside subject-specific content. Students at the Faculty of International Relations study English for Specific Purposes, and they use such AI tools and platforms as ChatGPT, Promova, Google Translate, Canva, Grammarly, Gemini, Duolingo, etc. to assist them in specific vocabulary acquisition, professional text translation, text summary, as well as in refining sentence structures and grammar. The number of participants in the current study were 77 students enrolled in their second, third and fourth year of studies.

Limitations. While the study aims to provide comprehensive insights into the effectiveness of AI tools for EFL learners, certain limitations must be acknowledged. First, the study is conducted in a specific context, which may not be generalizable to all language learning environments. Future research could explore the impact of AI tools in different educational settings or with different learner populations to assess the broader applicability of the findings. Additionally, the study focuses on the short-term effects of AI tools, and further research could investigate the long-term impact on language acquisition and learners' retention of skills. Finally, future studies could explore the effectiveness of different types of

AI tools (e.g., chatbots, grammar checkers, language platforms) and compare their efficacy in improving specific language skills.

Results and Discussion

This section discusses the outcomes of the participants' responses to a 3-point and 4-point Likert questionnaire, as well as open-ended questions.

The results of a 4-point Likert questionnaire reveal that the vast majority (more than 90%) of the respondents find the use of AI beneficial for their studies. However, when it comes to writing assignments, the responses are split, with about 45% of students not using AI for their tasks. 57% of respondents indicated that Artificial Intelligence tools help correct grammar mistakes in their writing assignments. Additionally, AI supports vocabulary acquisition of about 70% of the students and is an aid in the creative process as nearly 90% of the respondents claim that AI helps them generate ideas for writing tasks. Surprisingly, despite the positive feedback regarding the enhancement of writing assignments, 61% of the students believe that AI has not significantly improved their writing skills in English (see Table 1).

Table 1.

Question		Strongly agree	Agree	Disagree	Strongly disagree
The use of ChatGPT has been beneficial for my studies	F	**19**	**52**	**5**	**1**
	%	25	67.5	6.5	1.2
I do my writing assessments with the help of ChatGPT	F	**4**	**38**	**30**	**5**
	%	5	49	39	6.5
AI helps me correct grammar mistakes in my writing assignments	F	**12**	**32**	**27**	**6**
	%	15.5	41.5	35	8
AI helps me enhance my vocabulary acquisition	F	**12**	**40**	**23**	**2**
	%	15.5	52	30	2.5
AI helps me come up with ideas for my writing assignments	F	**18**	**49**	**9**	**1**
	%	23	63.5	11.5	1.2
I have enhanced my writing skills of English with the help of AI	F	**3**	**27**	**42**	**5**
	%	4	35	54.5	6.5

* The percentage is rounded up.

According to the 3-point Likert survey, over 90% of students report using AI applications at least occasionally when learning English. A significant number of students (around 75%) use AI tools for text translation. Around 60% use AI tools to refine sentence structures, and many students use AI to summarize texts, further demonstrating the versatility of AI in supporting learning (see Table 2).

Table 2.

Question		Always	Sometimes	Never
How often do you use AI applications when learning English?	F	**4**	**68**	**5**
	%	5	88.5	6.5
How often do you use AI tools for text translation?	F	**5**	**52**	**20**
	%	6.5	67.5	26
How often do you use AI tools to refine sentence structures?	F	**1**	**44**	**32**
	%	1.2	57	41.5
How often do you use AI tools to summarize texts?	F	**14**	**44**	**19**
	%	18	57	24.5

* The percentage is rounded up.

The results of the survey comprising open-ended questions revealed that the following platforms are among the most popular tools students use: ChatGPT (considered particularly useful by many), Promova, Google Translate, Canva, Grammarly, QuillBot, Noredink, Copilot, DeepL, Ewa, Tandem, Gemini, Yandex Translation, Elsa Speak, and Duolingo. Although these platforms are widely used, some respondents expressed skepticism or distrust toward AI tools.

When asked about specific skills that AI can help develop, responses varied. Some students use AI to improve reading comprehension and make summaries, simplified versions of texts, and translations. Others leverage AI for communication purposes, enhancing their speaking and listening skills through conversation simulations. Additionally, many students find AI-powered interactive exercises, such as listening activities, highly beneficial. AI is also valued for its ability to correct and explain grammar mistakes. The majority of interviewees indicated that their writing skills had improved with AI assistance, especially in terms of generating ideas for essays and identifying and correcting errors.

Several students noted that the learning process became more efficient and focused after the integration of AI tools. However, there was also some negative feedback regarding AI usage. Some students feel that AI makes them lazy and hinders their creative thinking.

While some students reported that AI tools helped to significantly lower their anxiety levels, making them feel more confident that their work was error-free, others expressed concerns about AI-generated content, believing that it hinders their ability to complete tasks independently, leading to stagnation in cognitive development. These respondents felt that depending on AI for writing assignments prevented them from using their problem-solving skills, which they felt were crucial for brain activity, intellectual growth, and overall learning.

Conclusion

This article explores the impact of artificial intelligence (AI) on language learning, particularly for English as a Foreign Language (EFL) learners within content-based classrooms. The study reveals how AI-powered tools are reshaping the educational landscape, offering students personalized, immediate feedback and assisting them with various language skills including grammar, vocabulary, and writing. Through a mixed-methods approach involving surveys, interviews, and observations, the study demonstrates that AI tools play a crucial role in enhancing language proficiency and fostering self-regulated learning behaviors among EFL learners.

The findings from the survey data indicate that over 90% of students acknowledge the benefits of AI in supporting their language learning. The majority of students use AI tools regularly, especially for text translation, refining sentence structures, and generating ideas for writing tasks. Notably, 70% of students reported that AI aids in vocabulary acquisition, and many students praised the tools for their ability to correct grammar and provide instant feedback. However, despite the overall positive feedback, students expressed mixed views regarding AI's influence on improving writing skills, with 61% believing AI had not significantly enhanced their writing proficiency. This suggests that while AI tools offer support, their role in advancing language skills, particularly writing, may require more targeted interventions or training to maximize effectiveness.

The article also highlights the role of AI in reducing language learning anxiety, with many students feeling more confident about their work after using AI tools. However, there is a noticeable concern among some students that over-reliance on AI could stifle creativity and critical thinking. These students believe AI may hinder their problem-solving abilities, potentially limiting cognitive development and independent learning. This dual perspective – acknowledging AI's assistance while questioning its impact on deeper learning – underscores the need for a balanced approach to integrating AI tools into language education.

In conclusion, AI-powered tools undeniably have significantly impacted the language learning process, providing both immediate and long-term benefits, particularly in grammar correction, vocabulary acquisition, and the development of language proficiency. They offer learners a personalized learning experience, encourage autonomous learning, and reduce anxiety. However, their use should be carefully monitored and integrated with traditional methods to ensure that learners are not overly reliant on technology at the expense of developing essential cognitive skills such as independent problem-solving, creativity, and critical thinking.

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գիտելիքների և զրավոր հմտությունների բարելավմանը։ Հետազոտությունն իրականացվել է խառը մեթոդների մոտեցմամբ՝ հիմնականում որակական վերլուծության միջոցով, նպատակ ունենալով գնահատել այս գործիքների ազդեցությունը լեզվի իմացության, ինքնավերահսկվող ուսուցման և սովորողների մոտիվացիայի վրա։ Արդյունքները ցույց են տալիս, որ արհեստական բանականության գործիքները կարող են զգալիորեն բարելավել լեզվի իմացությունը, ամրապնդել կոնկրետ հմտությունները և խթանել ինքնուրույն ուսուցումը։ Ուսումնասիրությունը նպաստում է արհեստական բանակության դերի վերաբերյալ էմպիրիկ հետազոտություններին և ընդգծում է դրա ներուժը՝ բարձրացնելու սովորողների ներգրավվածությունը և նվազեցնելու լեզվի յուրացման բացերը։

Բանալի բառեր. *արհեստական բանականություն, լեզվի իմացություն, արհեստական բանականության գործիքներ, խառը մեթոդներով հետազոտություն, անգլերենը որպես օտար լեզու (EFL)*

А. Мартиросян, М. Мкртчян, Р. Арустамян – *Влияние инструментов искусственного интеллекта на усвоение английского языка студентами (на примере факультета международных отношений ЕГУ)*. – Использование искусственного интеллекта (ИИ) в языковом образовании способно существенно трансформировать подходы к развитию языковых навыков у изучающих английский язык как иностранный (EFL). В настоящем исследовании рассматривается влияние инструментов, основанных на ИИ, на языковые достижения студентов, изучающих английский язык как иностранный, в особенности в рамках предметно-ориентированных курсов. Такие инструменты, как ChatGPT, Google Translate, Promova, Canva и другие, обеспечивают обучающихся оперативной обратной связью, способствующей расширению словарного запаса, совершенствованию грамматических знаний и развитию навыков письменной речи. Исследование выполнено с применением методологии смешанных методов, при этом основной акцент сделан на качественный анализ с целью оценки влияния данных инструментов на уровень владения языком, саморегулируемое обучение и мотивацию обучающихся. Полученные результаты свидетельствуют о том, что инструменты искусственного интеллекта способны значительно повысить уровень языковой компетенции, укрепить отдельные языковые навыки и стимулировать самостоятельное обучение. Кроме того, исследование направлено на расширение эмпирической базы по изучению роли ИИ в образовании, в частности в контексте предметно-ориентированного обучения языку, а также на выявление потенциала инструментов ИИ в персонализации обучения, повышении вовлечённости студентов и сокращении пробелов в усвоении языка.

Ключевые слова: *искусственный интеллект, языковая компетенция, инструменты искусственного интеллекта, исследование с использованием смешанных методов, английский как иностранный (EFL)*