

# AI in Foreign Language Learning: Changing Usage Practices, Perceptions, and Training Needs among EFL Students

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## Abstract

*AI is increasingly influencing foreign language education, with students gradually incorporating it into their learning. This study explores EFL learners' changing usage practices, perceptions, and training needs related to AI tools in language learning and academic tasks at a Turkish university. Employing a cross-sectional survey design with both quantitative and qualitative methods, data were collected through a structured questionnaire in two waves to identify changes over time. Findings show increased use of AI, especially for vocabulary, grammar, and writing support, with more usage of chatbots and writing assistants in the second phase. While students valued AI's role in enhancing language skills and academic performance, concerns emerged about ethical implications, overdependence, and reduced critical thinking. Over time, students expressed greater acceptance of AI and emphasized the need for ethical guidelines, skill development, and structured classroom integration. The study highlights the importance of teacher training, student awareness, and institutional support for effective and responsible AI use in language education.*

**Keywords:** Artificial Intelligence (AI) in foreign language learning, EFL learners' AI perceptions, AI tool usage practices, AI integration in curriculum, training needs

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## Introduction

Artificial Intelligence (AI) has emerged as a rapidly growing field of computer science, focusing on developing intelligent machines capable of tasks that typically require human intelligence, such as perception, learning, reasoning, problem-solving, and decision-making (Noble & Noble, 2023). AI has also been a research domain in education since the 1960s. Still, it is now transitioning from labs to classrooms, representing a significant shift towards more personalised, efficient, and responsive teaching and learning methodologies. This trend has led to the emergence of AI in education (AIEd) which refers to “the application of AI technologies, such as intelligent tutoring systems, chatbots, robots, and the automated assessment of all modes of digitized artifacts that support and enhance education” (Chiu et al., 2023, p.1). By using AI's capabilities such as content creation, instructional delivery, and assessment, educators can provide more personalised and effective learning experiences to meet diverse student needs and tailor learning experiences (Jiang, 2022; Rane et al., 2023).

Research has examined the effectiveness of AI in adaptive testing, intelligent tutoring systems, and learning analytics, particularly in higher education (HE), where AI-driven feedback and assessments have enhanced student learning outcomes (Chen et al., 2021; Hooda et al., 2022; Khan & Pardo, 2016; Tiwari, 2023). AI is also widely studied in foreign language learning, with research focusing on its role in personalised learning, motivation, and efficiency (Chen et al., 2021; Enzelina et al., 2023; Sumakul et al., 2022; Syahnaz & Fithriani, 2023). Other studies investigate AI's applications in language production, particularly in writing and reading (Ali et al., 2023; Karataş et al., 2024; Mun, 2024). Furthermore, the research examines ethical considerations, critical thinking implications, and disparities in AI usage across different learning contexts (Chan & Hu, 2023; Kolegova & Levina, 2024; Pratama et al., 2023). However, despite the growing body of research, most studies provide only cross-sectional insights, leaving a gap in understanding how learners' engagement with and perceptions of AI tools evolve over time. To address this gap, our study examines university-level English Preparatory Program (ELPP)

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students' experiences with AI tools at two distinct time points, exploring whether their perceptions and engagement with AI in language learning shift over time. The following research questions guide this study:

1. Do ELPP students' usage practices of AI tools and perceptions of their impact on learning English and performing academic tasks change over time between the two distinct waves of data collection? If they do not use AI tools, what reasons do they report for not using them?
  - a. What types of tools do they use, and how has this usage evolved between the two waves?
  - b. Which language skills and academic areas do students target with AI tools, and how does this usage differ between the waves?
  - c. What academic purposes do they use these tools for, and how do these purposes differ between the waves?
2. How do ELPP students perceive the integration of AI tools within the ELPP, and how have these perceptions changed over time?
3. What are ELPP students' suggestions regarding training on AI tool integration within the ELPP, and how have these suggestions evolved between the two waves of data collection?

### **AI and Language Learning Theories**

The integration of AI in language learning can be associated with established second language acquisition theories. Vygotsky's sociocultural theory (1978) posits that language learning is a socially mediated process, where interaction with more knowledgeable peers or tools facilitates development. AI-powered chatbots and intelligent tutoring systems serve as digital scaffolding, offering learners immediate, personalised feedback and interactive learning opportunities that align with Vygotsky's concept of the Zone of Proximal Development (ZPD). These tools provide targeted support, allowing learners to progress beyond their current abilities with AI as a cognitive partner (Yaseen et al., 2025).

Additionally, constructivist learning theory (Bruner, 1960; Piaget, 1950) emphasises the active role of learners in constructing knowledge through exploration and problem-solving. AI-driven platforms, such as adaptive learning systems and automated writing evaluation tools, align with this approach by encouraging self-directed learning through tailored content and personalised feedback. Similarly, self-regulated learning theory (Zimmerman, 2002) highlights the importance of goal-setting, metacognitive awareness, and self-monitoring in effective learning. AI tools support these processes by tracking learners' progress, offering real-time feedback, and recommending targeted exercises that promote strategic language development. Furthermore, AI-enhanced technologies, including intelligent tutoring systems and conversational agents, extend this support by providing interactive, personalised learning experiences (Younas et al., 2025).

By linking the current study's findings to these theories, we can better contextualise AI's role as not just a technological innovation but as a cognitive and pedagogical tool that aligns with well-established principles of learning and digital learning. Future research could further explore how AI-mediated learning environments enhance student engagement, motivation, and long-term language proficiency within these theoretical frameworks.

### **AI Applications in Language Learning**

AI technologies are increasingly integrated into foreign language education (FLE) to enhance language learning and teaching by offering personalised instruction, feedback, and practice opportunities. These advancements have the potential to support individualised learning pathways and facilitate a deeper engagement with the language learning process.

AI-driven tools, including automated writing evaluation (AWE), intelligent tutoring systems (ITSs), speech recognition, and virtual environments, are increasingly shaping FLE. AWE tools like Grammarly and Virtual Writing Tutor provide automated feedback to help learners refine their writing skills, while ITSs such as Busuu and Rosetta Stone personalise instruction through adaptive learning algorithms. Speech recognition technologies, including Google's Cloud Speech-to-Text and Rosetta Stone's TruAccent, assist learners in improving pronunciation. Additionally, chatbots and conversational agents, such as ChatGPT and Gemini, serve as virtual tutors, enabling interactive language practice and real-time feedback. Neural machine translation (e.g.,

Google Translate, DeepL) facilitates multilingual communication, while intelligent virtual reality (VR) environments simulate real-life scenarios for immersive language learning experiences (Jiang, 2022; Son et al., 2023).

Research has extensively examined the effectiveness of these technologies. Studies show that NMT tools enhance both productive and receptive language skills, as well as mediation abilities required for translation tasks (Klimova et al., 2023). AWE tools have been found to improve writing fluency, accuracy, and overall proficiency, though they are sometimes criticised for overcorrection, lack of human feedback, and failure to address deeper discourse layers (Barrott, 2023). AI-powered writing tools can particularly benefit students struggling with writing by providing sentence suggestions and generating text, ultimately improving their confidence and skills (Alharbi, 2023). In HE, AI-integrated writing systems have been positively received for their multifaceted support, but also present challenges related to AI reliability, student dependence, and task design (Kim et al., 2024).

ITSs have been found to enhance grammar acquisition, reading comprehension, and self-regulated learning strategies (Jiang, 2022). Affective tutoring systems, designed to recognise and respond to learners' emotions, have successfully reduced test anxiety and communication apprehension, contributing to a more engaging learning experience (Lin et al., 2015). Similarly, research on VR in language learning highlights its role in fostering critical 21st-century skills, offering immersive experiences that deepen engagement and enhance knowledge retention (Parmaxi, 2023).

In conclusion, the integration of AI into FLE has significantly transformed language learning by personalising instruction, improving accessibility, and fostering greater learner engagement. While some challenges remain, such as the need for human oversight (Price, 2024) and the limitations of automated feedback (Barrot, 2023), AI technologies continue to offer innovative solutions that support diverse language learning needs. Moving forward, refining these tools and expanding their capabilities will be crucial in ensuring their long-term effectiveness and meaningful incorporation into educational settings.

### **Learners' Experiences and Perceptions of AI Usage in Foreign Language Learning**

Integrating AI into FLE presents new opportunities and challenges for learners. This brief review explores foreign language learners' diverse perceptions and experiences with AI-assisted learning, focusing on attitudes and impacts on language development across various educational contexts, usually in HE.

Studies reveal a variety of perspectives on AIEd across different FLE contexts. In Taiwan, Chen et al. (2021) report a generally positive response to AI in personalised language learning, enhancing skills, attitudes, and motivation. Similarly, Chan and Hu (2023) find that Hong Kong university students recognise the potential of GenAI tools like ChatGPT but express concerns about accuracy, privacy, ethics, and their impact on personal and professional development. In Indonesia, Syahnaz and Fithriani (2023) and Sumakul et al. (2022) highlight AI's benefits in improving academic writing and the overall writing process. Enzelina et al. (2023) note that students view AI-based applications as innovative and beneficial in post-pandemic learning. Ali et al. (2023) emphasise AI's encouragement of reading and writing. Guo and Wang (2024) also highlight the impact of AI on EFL students' academic engagement and emotional experiences, suggesting that AI-enhanced instruction can foster cognitive, emotional, and social engagement.

Moulieswaran and Kumar (2023) point to AI's efficiency and time-saving benefits in both classroom and self-study contexts, while Erito (2023) links AI technologies to enhanced self-efficacy and motivation in English writing. Alammar and Amin (2023) analyse the careful yet positive use of automated paraphrasing tools, emphasising the need to balance technology reliance with developing paraphrasing skills. Pratama et al. (2023) identify AI as valuable for independent learning and virtual tutoring but acknowledge its limitations in teaching fundamental computer skills.

In Russia, Kolegova and Levina (2024) find AI tools more frequently used in ESP courses than in practical English classes, with students appreciating instant feedback and access to diverse resources but voicing concerns about critical thinking and personal connections. At a Turkish university, Karataş et al. (2024) report ChatGPT's positive impact on writing, a finding echoed by Mun (2024), who notes that Korean EFL learners using ChatGPT demonstrate greater improvements in grammatical accuracy and lexical choice than those receiving peer feedback.

The combined findings from various studies indicate varied perceptions of AI among foreign language learners. On the positive side, learners noted improvements in language acquisition, motivation, and educational outcomes. On the other hand, they raised concerns regarding AI's accuracy, ethical issues, reliance on technology, and the potential loss of human interaction. As AI becomes increasingly prevalent in FLE, it is imperative to address these concerns, adapting AI tools to better meet learners' needs and enhance their overall educational experience. This balanced approach will help ensure that AI serves as a practical and supportive component in EFL learning environments.

## Method

### Research Design

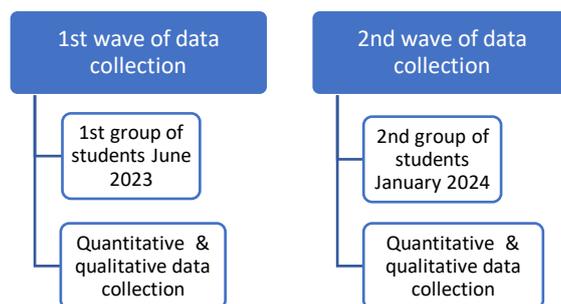
Framed as descriptive survey research, this study employed a multiple cross-sectional research design with both quantitative and qualitative components to explore the perceptions about and utilisation of AI tools for language learning and other academic purposes among ELPP students at a state university in Türkiye. Survey research involves the detailed examination of a topic of interest in a target population (Rose et al., 2020). Cross-sectional research, on the other hand, provides a description of variables under investigation by collecting data at a single point in time, while multiple cross-sectional studies attempt to account for the changes in these variables over the course of time (Phakiti & Paltridge, 2015).

In our research, two waves of data collection took place over two academic years. The first wave was completed at the end of the spring term in June 2023, after ChatGPT by OpenAI was introduced in November 2022, to assess the extent to which this disruptive technology impacted students. As AI technology continued to evolve and penetrate various aspects of life, we sought to investigate its impact.

Thus, to understand whether the subsequent wave of students showed increased utilisation and adoption of AI technologies over time, we collected a second wave of data at the end of the following fall term in January 2024. Therefore, we thought that gathering data at two distinct time points from two subsequent waves would help us observe the changing usage practices of AI among ELPP students over an extended period (see Figure 1).

**Figure 1**

*Cross-sectional Research Design and Data Collection Waves*



### Publication Ethics

This study adhered to publication ethics and received ethical approval from the university's Ethics Committee. All participants were informed of the study's purpose, confidentiality was ensured, and their informed consent was provided prior to participation.

### Setting and Participants

The research setting was the English Language Preparatory Program (ELPP) in the School of Foreign Languages at a Western Turkish university. The ELPP runs intensive English language courses in the foundational year for students from various departments, including English Language Teaching, English Language and Literature, Management, Economics, International Relations, Archaeology, History, Biology, Computer Engineering, Environmental Engineering, Molecular Biology and Genetics, etc. The program offers instruction in all English language skills and areas, ranging from A1 to C1 levels. It aims to equip learners with skills, knowledge, and

confidence so that they can meet the academic English demands and requirements in their departments upon completion of their studies.

To select participants, we employed a purposeful sampling method to identify and select cases that provide valuable insights while making efficient use of limited resources (Patton, 2002). This decision was based on observations that ELPP students frequently use AI tools in their learning and assignments, indicating that they could offer rich data relevant to the research objectives. The participants exhibited distinct characteristics, with variations in numbers and demographics between the first wave of data collection in June 2023 and the second wave in January 2024. The number of students participating in the first round was 60 (38 females and 22 males; 45 students between 18 and 20 years old and 15 students between 21 years old and above). The number of participants in the second round was 113 (77 females, 33 males, and 3 unspecified; 107 students between 18 and 20 years old and 6 students 21 years old and above). The difference between the two waves can be attributed to the devastating earthquake in Türkiye in February 2023, before the first round of data collection, leading to the transition to online education and consequently affecting students' participation rates.

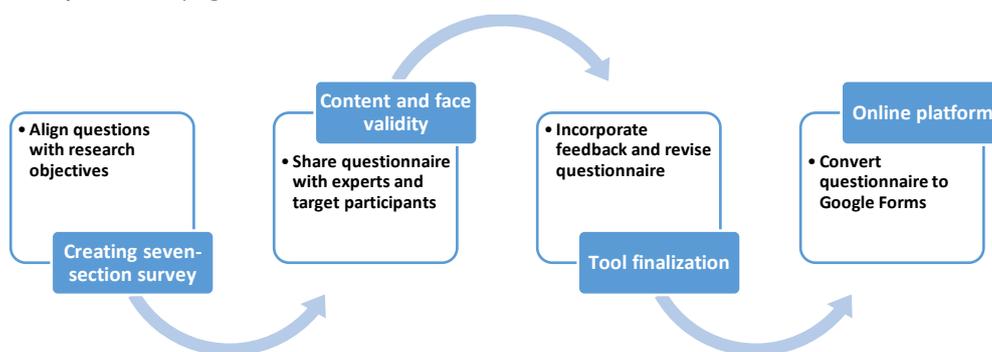
### Data Collection

We developed a survey questionnaire consisting of 22 questions categorised under seven sections: research subject and purpose, informed consent, participant demographics, AI application usage, reasons for not using AI, purposes and needs for AI tool use, and use of AI tools within the ELPP courses. Sections on participant demographics (e.g., *gender, age*), AI application usage (e.g., *In your daily life, in which situations do you use AI tools that are not related to learning English? Please tick the appropriate options below.*), and purposes/needs for AI tool use (e.g., *As a student in the English preparatory class, for which academic purposes do you use AI tools? Please tick the appropriate options.*) primarily yielded quantitative data. Open-ended questions within the sections on reasons for not using AI and use of AI tools within ELPP courses (e.g. *Are AI tools used in the courses offered in the English preparatory program? If your answer is yes, could you please provide details? In which courses, which tools are used, and for what purposes?*) generated qualitative data.

To ensure the validity of the survey questionnaire, both content and face validity procedures were followed. Content validity refers to the extent to which items in a measure adequately represent the construct being investigated (Gass, 2015; Rose et al., 2020). One way of establishing content validity is to seek expert review where subject specialists examine the tool and identify items to be removed, added, or modified to ensure the construct is covered comprehensively (Rose et al., 2020). In line with this, we shared the draft questionnaire with two English language teaching experts and two students from the target participant group to obtain both expert and end-user perspectives. This step also provided face validity, which concerns the extent to which a measure is recognizably measuring what it aims to measure (Gass, 2015). Based on the feedback received from both groups, we then made corrections and revisions and finalised the questionnaire. Finally, we created an online version of the survey questionnaire using Google Forms to collect responses. Figure 2 illustrates the development process of the survey questionnaire.

### Figure 2

*Development of the Survey Questionnaire*



### Data Analysis

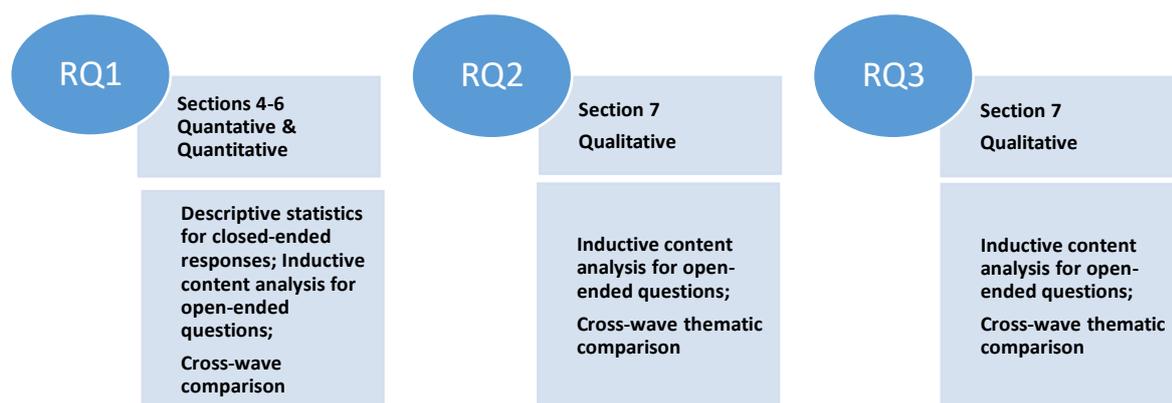
We subjected the collected data to both quantitative and qualitative analyses according to the types of research questions. Quantitative data from closed-ended questions were analysed using descriptive statistics such as

percentages and frequencies. Qualitative data from open-ended questions were analysed through inductive content analysis. The process involved several rounds of coding to identify key concepts, followed by the formation of themes and categories. To ensure meticulous documentation of analytical procedures, detailed coding logs and analytic memos were maintained throughout the process, recording coding decisions, theme development, and reflections. This process enabled a thorough examination of both numerical trends and in-depth insights from participants' responses, providing a comprehensive analysis of the research topic. Example quotes are provided for the codes, with participants labelled as P1, P2, etc., to ensure clarity and maintain confidentiality in presenting their responses.

To clarify the link between our research questions, datasets, and analysis approaches, Figure 3 outlines which survey sections generated the relevant data, the type of data collected, and the corresponding analysis method.

**Figure 3**

*Mapping of Research Questions to Data Sources and Analysis Methods*



### Researcher Role and Context

Given the qualitative nature of this study, we acknowledge our positionalities within the research context. The first author, as a lecturer in the ELPP, had access to participants and thorough contextual knowledge. She facilitated participant recruitment by inviting students to the research study via various ways, such as in-class announcements and Microsoft Teams. The second author, while not affiliated with the School of Foreign Languages, is an experienced researcher at the same university and familiar with the school's structure and student population. This combination of insider and external perspectives helped to develop a balanced approach to data collection, analysis, and interpretation. Throughout the research process, we engaged in ongoing discussions and dialogue, which ensured reflexivity and methodological rigour.

## Findings and Discussion

### Changes in ELPP Students' AI Tool Usage Practices and Perceptions over Time

In the first wave of data collection, 48 students (80%) reported using AI tools for learning, improving, or practising English, while 12 students (20%) reported not utilising such tools. The most frequently cited reasons for not using AI tools for learning English included a lack of perceived need or interest, followed by scepticism about AI's effectiveness, and a preference for traditional learning methods. Additionally, some students were discouraged by the effort required to use AI tools or were unsure about their potential benefits. In terms of the extent to which AI tools contribute to learning English, the majority of the respondents perceived a significant (66,7%) or moderate (31,3%) contribution, with only 2,1% indicating little contribution.

In the second wave, there was a 5% increase in the proportion of participants using AI tools for English learning purposes, with 97 students (85%) reporting usage, while 16 of them (15%) indicated not utilising them. Similar to the reasons in the first wave, the most common reasons for not using AI in learning English were a perceived lack of need or interest and a lack of knowledge or understanding about how to use these tools. Some students were sceptical about AI's effectiveness, either because they felt confident in their current language skills

or because they feared negative impacts on learning. Others found AI tools inconvenient or flawed. As for the extent to which AI tools contribute to learning English, the majority of participants (70.8%) reported a significant contribution, with 26% perceiving a moderate contribution, and only 3.1% reporting little contribution (see Table 1).

**Table 1**

*Comparison of AI Tool Usage and Perceived Learning Impact among ELPP students in Waves 1 and 2*

Wave	AI tool usage	%	Perceived learning impact	%
Wave 1	Use AI tools	80	Significant	66.7
	Don't use AI tools	20	Moderate	31.3
			Little	2.1
Wave 2	Use AI tools	85	Significant	70.8
	Don't use AI tools	15	Moderate	26
			Little	3.1

These findings reveal a gradually increasing trend in the adoption of AI tools among ELPP students. This shift indicates a growing recognition of and confidence in AI tools, likely driven by the release of GenAI chatbot tools such as ChatGPT, developed by OpenAI and launched in November 2022. Consequently, with the increasing recognition of ChatGPT and other GenAI tools worldwide, we can presume that the students in English preparatory classes are using AI tools more frequently for language learning and performing academic tasks. Additionally, if teachers are using certain AI applications in their classrooms, there may have been an increase in students' awareness and use of these tools as well.

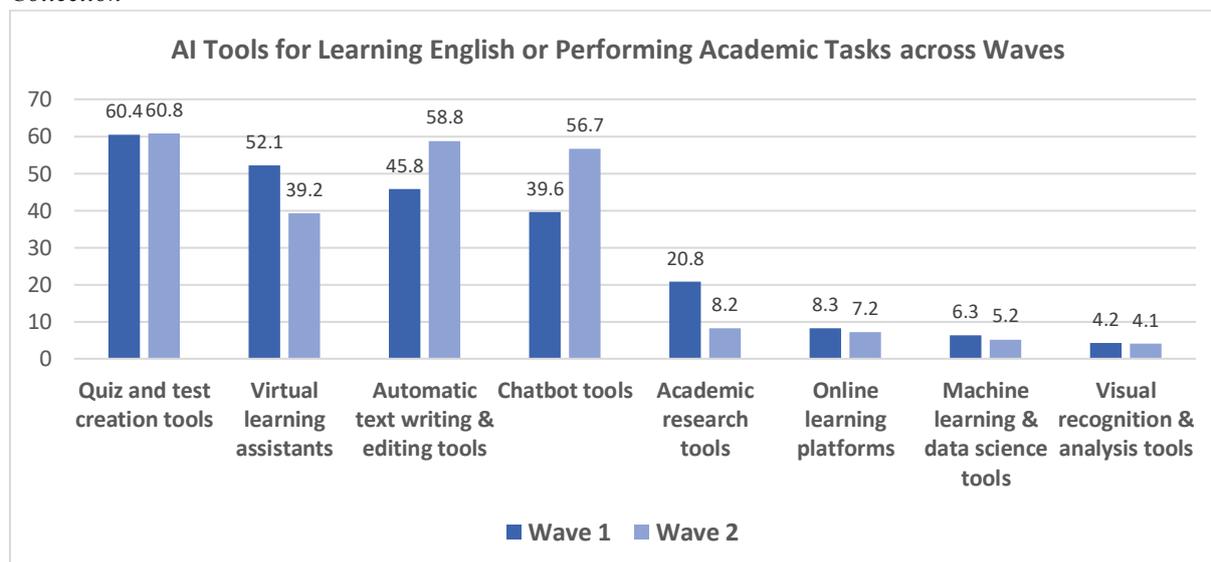
To sum up, the findings suggest an evolving positive outlook on the role of AI tools in English language learning within the ELPP, which may also highlight their potential to improve learning outcomes and educational practices. This aligns with other research, highlighting AI's potential to enhance learning outcomes and educational practices, as well as the generally positive perceptions of AI in language learning across various contexts (e.g., Chen et al., 2021; Enzelina et al., 2023; Karataş et al., 2024; Moulieswaran & Kumar, 2023; Nguyen, 2024).

#### Types of AI Tools Used by ELPP Students and Their Evolution across Data Collection Waves

We intended to explore the types of AI the participants preferred to use. The findings are displayed in Figure 4.

**Figure 4**

*AI Tools Used for Learning English or Performing Academic Tasks in The First and Second Waves of Data Collection*



In the first wave, the most commonly reported AI tools employed by the students for learning English or performing academic tasks were quiz and test creation tools (60.4%), followed by virtual learning assistants (52.1%), automatic text writing and editing tools (45.8%), and chatbot tools (39.6%). The employment of academic research tools, online learning platforms, machine learning and data science tools, and visual recognition and analysis tools was relatively lower, ranging from 20.8% to 4.2%.

In the second wave, similar trends were observed with quiz and test creation tools (e.g., Kahoot and Quizlet) remaining the most popular (60.8%), followed by automatic text writing and editing tools (e.g., Grammarly and Hemingway) (58.8%), chatbot tools (e.g., ChatGPT and Gemini) (56.7%), and virtual learning assistants (e.g., Duolingo and Rosetta Stone) (39.2%). There was a decrease in the reported usage of virtual learning assistants, while the usage of automatic text writing and editing and chatbot tools increased noticeably. The usage of academic research tools (e.g., Google Scholar and ResearchGate), online learning platforms (e.g., Coursera and Udemy), machine learning and data science tools (e.g., Jupyter Notebook and Google Colab), and visual recognition and analysis tools (e.g., ImageJ and DeepDream) remained relatively low, with minor fluctuations in percentages.

Overall, there was consistency in the usage practices of quiz and test creation tools across both waves of data collection. This finding aligns with earlier findings that such tools are well-established in enhancing learner engagement and fostering autonomous learning (Chen et al., 2021; Nguyen, 2024; Sumakul et al., 2022). Their continued popularity could imply that students find these tools effective for evaluating their progress and getting prepared for exams, suggesting that they contribute positively to attaining learning outcomes in English language learning contexts.

On the other hand, there was a noticeable increase in the usage of certain AI tools, particularly chatbot tools and automatic text writing and editing tools. This increase mirrors the rising interest in GenAI applications for academic and language learning purposes. This shift is supported by research. For instance, Enzelina et al. (2023) and Karataş et al. (2024) emphasise the expanding role of AI technologies, particularly in facilitating writing tasks and providing interactive learning experiences, supporting the significant increase in the use of chatbot tools.

The declining use of virtual learning assistants may indicate a shift in students' preferences toward more interactive and responsive tools like chatbots since they provide immediate feedback and tailored responses, as suggested by Zabelin et al. (2023). Similarly, students seem to prefer general-purpose AI tools that support their language and academic skills, as indicated by the relatively low usage of more specialised tools, such as academic research or machine learning platforms.

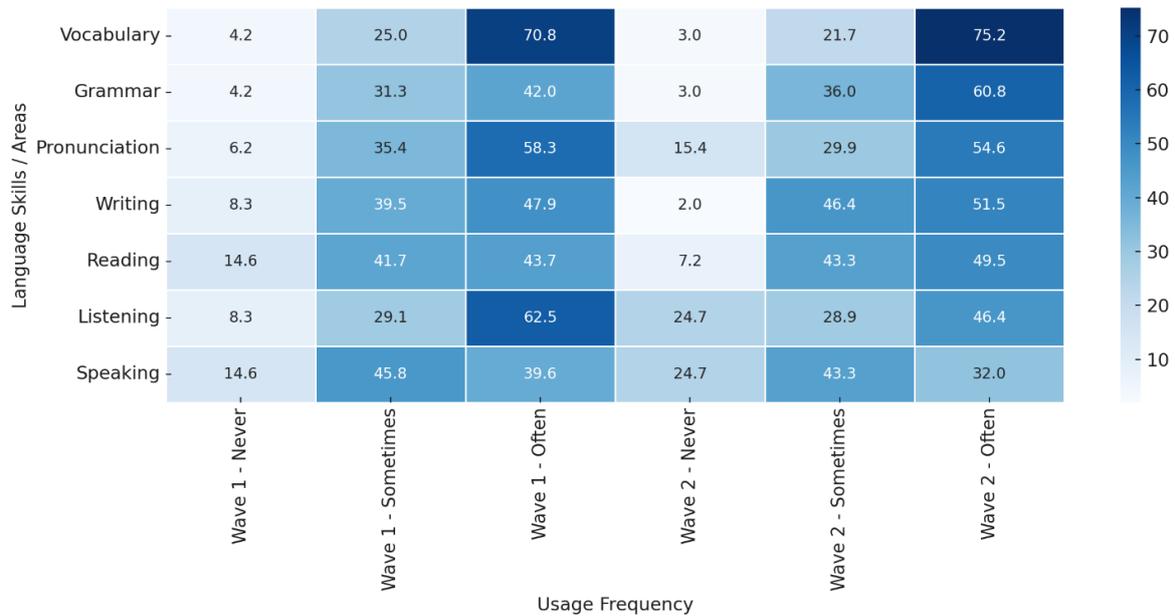
In sum, the evolving tool preferences may indicate that learners are progressively recognising the utility of AI in enhancing learning outcomes, especially in relation to specific tasks they need to perform, such as preparing a presentation or writing paragraphs or essays. This finding is echoed in research on the potential of AI for English for academic purposes (Mun, 2024; Sumakul et al., 2022; Syahnaz & Fithriani, 2023).

### **Targeted Skills and Academic Areas in AI Tool Use across Waves**

We examined the language skills and areas for which the participants employed AI tools and the frequency of the reported usage (see Figure 5).

**Figure 5**

*Language Skills/Areas for which the Students Use AI Tools and the Frequency of Their Use*



In both waves, vocabulary was the most frequently targeted skill using AI tools, with usage rising from 70.8% to 75.2%. Grammar usage saw a significant increase (42% to 60.8%), while pronunciation remained steady (58.3% to 54.6%). Writing and reading were also frequently practised, with writing at 47.9% to 51.5% and reading at 43.7% to 49.5%. Listening declined from 62.5% to 46.4%, and speaking remained the least targeted skill (39.6% to 32%).

These shifts highlight evolving language learning needs and priorities. The strong focus on vocabulary reinforces its foundational role, while increased AI use for grammar and pronunciation suggests expanding learning strategies. Lower engagement with AI for speaking may reflect limited interactive tools at the time. Overall, these findings emphasise the dynamic nature of AI-assisted learning and point to potential areas for enhancing AI capabilities.

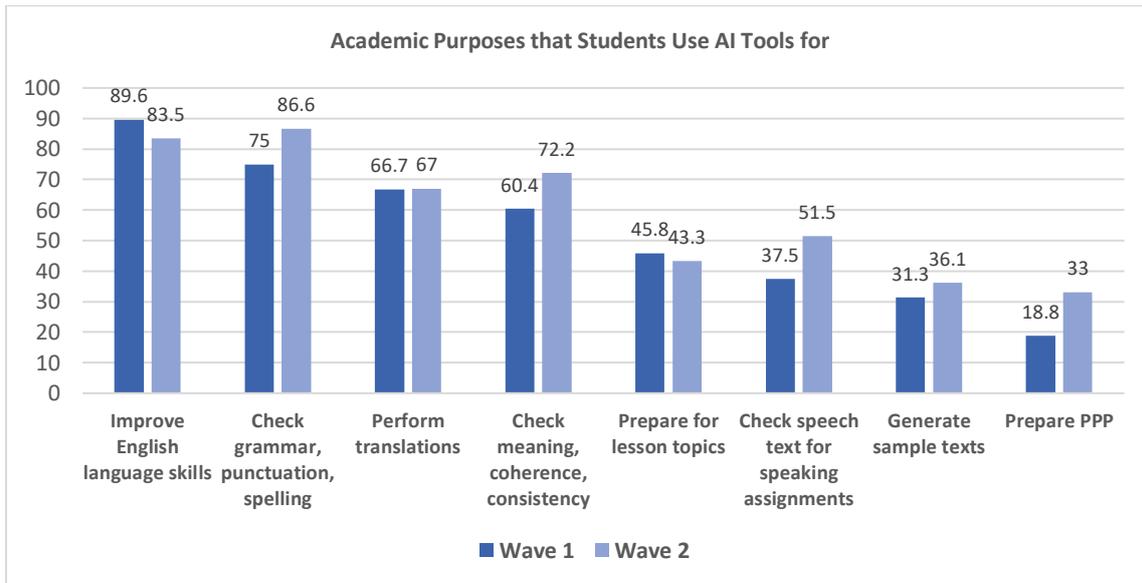
While prior studies have focused on the impact of specific AI tools on individual language skills (e.g., Alharbi, 2023; Ali et al., 2023; Sumakul et al., 2022; Syahnaz & Fithriani, 2023), this study uniquely explores students' autonomous AI tool usage in language learning, making it a pioneering contribution.

#### **Academic Purposes of AI Tool Usage across Waves**

In addition, we explored academic purposes for which the participants used AI tools through the third sub-question of RQ1. The findings are presented in Figure 6.

**Figure 6**

*Academic Purposes for which Students Use AI Tools in the First and Second Waves of Data Collection*



As shown in Figure 6, there were notable shifts in students' autonomous use of AI tools for academic purposes between the two waves. The percentage of students using AI to check grammar, punctuation, and other writing aspects increased from 75% to 86.6%, while those verifying sentence coherence and consistency rose from 60.4% to 72.2%. AI use for reviewing speech texts in speaking assignments grew from 37.5% to 51.5%, and for preparing PowerPoint presentations, from 18.8% to 33%. These trends indicate students' increasing use of AI to improve linguistic accuracy, coherence, and presentation quality. Students also used AI extensively to enhance English skills (89.6% – 83.5%), perform translations (66.7% – 67%), and prepare for lessons (45.8% – 43.3%). AI-assisted text generation rose from 31.3% to 36.1%.

Overall, the findings for RQ1c highlight AI's growing role in academic tasks, expanding from writing and speaking to presentations and text generation. Chatbots and writing assistants saw wider adoption, particularly for tasks requiring immediate feedback. Increased AI exposure in education and social contexts, along with instructor-led integration, likely contributed to students' greater confidence in AI's benefits and limitations. Nguyen (2024) in Vietnamese HE noted similar trends, where English majors used AI primarily for language enhancement, feedback, and assignments.

### ELPP Students' Perceptions of AI Tool Integration and Their Changes over Time

The second research question aimed to explore students' perceptions of the integration of AI tools in the ELPP. Although not specifically asked, students' responses included mentions of various online and digital tools beyond AI applications. This emergent data was considered significant and incorporated into the final analysis. Tables 2 and 3 present the results from the analysis of both datasets sequentially.

**Table 2**

*Wave 1: The Use of Digital, Online, and AI Tools in the Courses within the ELPP*

Theme	Category	<i>f</i>	Example quote
Vocabulary enhancement	Vocabulary learning apps and games	8	We use <i>Quizlet</i> . We can learn the vocabulary of the units we cover in a fun and memorable way with different types of games (P11).
	Online dictionaries	3	Online Dictionaries are mostly used ( <i>Oxford, Cambridge, Tureng, etc.</i> ) (P52).

Theme	Category	<i>f</i>	Example quote
	Translation tools	8	Translate apps are mostly used for unknown words or sentences that can't be formed (P31).
Writing and grammar support	Grammar correction tools	4	Grammar-checking apps like <i>Grammarly</i> are being used (P29).
	Writing assistant and feedback	7	AI tools are used in the writing skills course (P37).
Online learning platforms and digital tools	Learning management system	4	Our classes are conducted through the <i>Microsoft Teams</i> app (P33).
	Course materials and resources	7	We use a digital system compatible with the book. There is a video and audio content (P26).
Interactive learning and engagement	Interactive games and activities	7	Our teachers sometimes prepare both educational and entertaining activities in the form of games such as <i>Kahoot</i> and <i>Quizlet</i> (P38).
Skills development	Improving pronunciation	2	AI is used to improve our pronunciation and learning of words (P17).
	Developing reading, listening and speaking	3	We use <i>Kahoot</i> and AI tools for practising listening and speaking (P9).
Adoption level of digital/AI tools	No use of AI tools	9	AI is not used (in our classes) (P46).
	Limited use and awareness	2	Since AI has only recently become common, it has not been integrated much (P4).
	Traditional approaches	2	We rely more on books than on AI (P20).

As the findings in Table 2 reveal, students' opinions regarding the inclusion of digital, online, and AI tools in the ELPP preparatory program exhibit a diverse range of perspectives in the first wave. While some expressed positive experiences with AI tools across various language learning domains, such as vocabulary enhancement, writing and grammar support, online learning platforms, interactive engagement, and skills development, others indicated mixed perceptions and limited usage. Positive feedback highlighted the effectiveness and enjoyment derived from digital and AI tools, such as vocabulary learning apps/games, grammar correction tools, and interactive classroom games. However, there were also mentions of limited awareness or recent integration of AI tools, as well as a preference for traditional approaches over AI tools. Furthermore, some students reported either no usage or minimal integration of AI tools in their classes, suggesting varied levels of exposure and familiarity with technology. Overall, the diverse perspectives of students on AI inclusion in the ELPP suggest varying degrees of AI integration by instructors. This highlights the need for consistent, informed, and collaborative use of AI, considering learners' preferences and the global trend of AI adoption in FLE.

**Table 3**

*Wave 2: The Use of Digital, Online, and AI Tools in the Courses within the ELPP*

Theme	Category	<i>f</i>	Example quote
Adoption level of digital/AI tools	Used	80	We use it (AI) in many ways. AI tools help in all areas (P90).
	Not used	13	We do not use it (P78).
	Uncertain	7	I don't remember (P99).
Types of digital/AI tools utilised	Quiz and test creation tools	18	We use <i>Kahoot</i> and <i>Quizlet</i> sometimes to reinforce the topic with questions (P92).
	Learning management systems	7	<i>Microsoft Teams</i> is a platform we frequently use both inside and outside of class (P35).

Theme	Category	<i>f</i>	Example quote
Tools used for course-specific application	Writing and grammar assistance tools	11	We usually use <i>Grammarly</i> to check grammar, punctuation, and meaning in any writing assignment (P37).
	Plagiarism detection tools	5	The <i>Turnitin</i> app is used to detect and prevent plagiarism (P13).
	Online educational resources	18	We use dictionary platforms like <i>Cambridge</i> and <i>Oxford</i> a lot (P13).
	Translation tools	6	For translation, some apps like <i>Tureng</i> and <i>Google Translate</i> are used (P101).
	Chatbots	3	...we use <i>ChatGPT</i> for coming up with titles, etc. (P76).
	Tools used for writing tasks	11	I remember it was used to present an example text in the writing class (P28).
	Tools used for reading classes	8	In the reading class, we used to prepare and play <i>Kahoot</i> to reinforce what we learned (P67).
Tools used across courses without a specific focus	10	(They are used) to gain speed in terms of progression in all classes (P22).	
Tools used for vocabulary learning	4	We use the tools for learning and practising vocabulary (P64).	

Table 3 reveals a high adoption of digital/AI tools in the second wave, with 80 mentions of usage versus 13 non-usage and 7 uncertain cases. Common tools included quiz makers (e.g., Kahoot, Quizlet), LMS platforms (e.g., Microsoft Teams), writing aids (e.g., Grammarly), plagiarism checkers (e.g., Turnitin), online resources (e.g., dictionaries, digital textbooks), translation tools, and chatbots (e.g., ChatGPT). These were used for writing, grammar checks, reading, vocabulary, and overall skill development.

While AI tool adoption was widespread, some participants reported limited awareness or classroom integration. The findings highlight a growing shift toward digital tools in ELPP, though gaps remain. Consistent with prior research (Kim et al., 2024; Kolegova & Levina, 2024), the results suggest the need for structured and informed AI integration aligned with learner needs and global FLE trends.

### Evolving Suggestions on AI Tool Integration Training among ELPP Students

The third research question sought to discover students' recommendations for AI tool integration training within the ELPP. The results from analysing both datasets are presented in Tables 4 and 5, respectively.

**Table 4**

*Wave 1: Students' Suggestions for the AI Training within the ELPP*

Theme	Category	<i>f</i>	Example quote
Attitudes towards AI training	Positive attitudes	39	The modern age we live in has brought us closer together with technology. Therefore, this training should be given (P31).
	Negative attitudes	9	There is no need for training, as it is very easy to learn how to use AI tools that are often used (P22).
	Neutral attitudes	3	I have no idea (P25).
Mode of the AI training	Integration of training into classes	4	In the ELPP, it may be useful to provide training on how we can use AI tools. This training can be integrated into our lessons (P9).

Theme	Category	<i>f</i>	Example quote
	Separate training session	5	More informatics courses should be designed, as AI is expanding beyond English and is gradually more integrated into daily life (P34).
Aims and content of training	Ethical use and awareness	2	Students themselves should be mature enough to know what is right and what is wrong. Still, it would be good to inform them about theft and cheating (P6).
	Improving language skills	9	The aim of the training should be to enhance students' language learning skills and make their knowledge permanent. The content should include listening, reading, writing, and speaking (P21).
	Emphasis on training for writing skills	5	I believe that writing courses benefit most from these (AI) apps, and the criteria for getting help from AI could be explained in the training (P49).
	Interactive and practical training	2	This training can be given online with compulsory participation (P31).
Evaluation and scoring	Ethical use in grading	1	In my opinion, AI should not be used in any task where the student's grading is involved (P30).
	Real-time feedback	1	A teacher may not always be able to help all their students find spelling mistakes and general deficiencies in their writing. AI that we can reach at any time can correct our mistakes and guide us (P26).

Four themes emerged in the first wave of the dataset, focusing on students' suggestions for AI training within the ELPP. The majority of participants expressed positive attitudes towards AI training, emphasising the increasing role of technology in modern life and the necessity of structured instruction. A smaller group held negative attitudes, arguing that AI tools are intuitive and do not require formal training. Meanwhile, a few participants remained neutral, indicating no strong opinion on the matter. Regarding the mode of AI training, opinions varied between integrating training into existing lessons and providing separate training sessions. Some participants suggested incorporating ethical considerations in the training content, along with an emphasis on improving language skills, particularly writing, through interactive and practical training methods. Additionally, there were discussions about the ethical use of AI in grading and its potential for real-time feedback.

The emergence of predominantly positive attitudes toward AI training among ELPP students reflects the growing recognition of AI's transformative potential in FLE, as reported in recent literature. Consistent with the theoretical perspectives on AI applications in FLE, participants expressed an awareness of AI's role in providing personalised, immediate, and practical language learning support (Jiang, 2022; Son et al., 2023). The diversity in preferences for training delivery modes (integrated vs. separate training sessions) highlights the need for flexible instructional design that accommodates varied learner contexts and institutional frameworks, aligning with the constructivist emphasis on learner-centred, adaptive education. The participants' call for ethical considerations in AI training resonates with current concerns about responsible AI use, including issues around fairness in grading and transparency in feedback mechanisms (Chan & Hu, 2023; Price, 2024). Moreover, the emphasis on interactive, skills-oriented training methods echoes research advocating experiential and self-regulated learning strategies supported by AI tools, which enhance motivation and engagement while developing critical language competencies (Lin et al., 2015; Parmaxi, 2023).

**Table 5***Wave 2: Students' Suggestions for AI Training within the ELPP*

Theme	Category	<i>f</i>	Example quote
Attitudes towards AI training	Positive attitudes	64	We must receive training on how to use AI. I'm sure it will help us learn English better. The main reason students don't use it is that they don't know how due to a lack of training (P99).
	Negative attitudes	25	I think there is no need (P96).
	Neutral attitudes	3	I have no opinion (P90).
Preferred courses/language areas for AI training	Writing	16	Training could be provided within the writing classes (P69).
	Grammar and punctuation	7	Training should be provided on selecting appropriate AI tools to use in various areas, especially in writing classes for improving grammar and punctuation (P28).
	English classes in general	4	There should be space for this (training) in classes. The goal is for students to develop themselves in English beyond the class topics (P88).
	Listening and speaking	1	Especially, it should be included in listening and speaking classes (P20).
Mode of the AI training	Integrated into the ongoing classes	7	Methods of utilizing AI in class can be explained, and products can be evaluated based on their intended use (P51).
	Structured training in separate courses	3	There should be detailed classes explaining its use so that we can use it within an ethical framework (P74).
	Voluntary/optional training	2	I think such training should be given, but it should not be mandatory (P32).
	Self-learning	5	Everyone can learn how to use it with their own effort (P29).
Specific concerns and considerations of AI training	Teaching proper and responsible use of AI	3	Proper use (of AI) should be taught (P11).
	Teaching ethical issues and how to avoid plagiarism	8	I think training can be provided on how to avoid plagiarism and use it ethically (P65).
	Targeting engagement and motivation	1	There is a high rate of attention loss and disregard at this age, so it should be explained how it can contribute to the student in this sense (P97).
	Indicating the educational and practical value of AI	2	It should generally be practical and focused on usage because we might need to practice and use it (P81).

The second dataset revealed varied student attitudes toward AI training, with predominantly positive views alongside some negative and neutral perspectives. Writing was the most preferred skill for AI training, followed by grammar, punctuation, and general English, with some interest in listening and speaking. Preferences for training modes varied, with some favouring integration into existing courses and others preferring separate courses or self-learning options. Key concerns included responsible AI use, ethical issues like plagiarism, motivation, and the educational value of AI.

Despite differing views on AI training, there was a shared emphasis on ethical considerations and practical skill development. The growing role of AIED underscores the need for structured training programs to maximise benefits and mitigate risks. This aligns with Zainuddin et al. (2024), who highlighted the importance of ethical AI training in FLE. The findings suggest that educators and policymakers should establish guidelines for responsible AI use while addressing diverse student needs in language learning. Taken together, these findings underscore the importance of developing comprehensive AI literacy programs within ELPP curricula—programs that not only equip learners with technical proficiency in AI tools but also foster critical awareness of their ethical implications and pedagogical potentials, thereby supporting more effective and responsible integration of AI in foreign language learning.

### **Conclusion and Suggestions**

This study examined ELPP students' usage practices, perceptions, and training needs regarding AI tools in English language learning across two waves of data collection. Regarding RQ1, findings demonstrated a positive and gradually increasing trend in AI tool adoption. The most common reasons for non-use included lack of interest, skepticism, and limited knowledge. Students primarily used quiz and test creation tools consistently, while notable growth occurred in the use of chatbots and automatic writing/editing tools, reflecting emerging trends in generative AI. Vocabulary remained the most targeted language skill, followed by increased use of AI for grammar and writing tasks, while speaking skills remained less engaged with AI tools. In academic contexts, AI's role expanded from grammar and writing support to include speech preparation and presentation design.

In relation to RQ2, student perceptions of AI integration within the ELPP were diverse yet increasingly favourable over time. While many students appreciated the benefits of digital and AI tools across language domains, some reported limited awareness or preference for traditional methods. This variability underscores the need for consistent and informed AI incorporation by educators to better meet learner preferences and global trends in language education.

For RQ3, students' suggestions for AI training revealed predominantly positive attitudes, emphasising the necessity of structured instruction. Preferences varied between integrating AI training into existing courses and offering separate training sessions. Writing skills were identified as the primary focus area, followed by grammar and general English, with ethical considerations such as plagiarism and responsible AI use highlighted as essential components of training. These findings call for the development of comprehensive, flexible, and ethically grounded AI literacy programs within ELPP curricula, supporting learners' technical competencies as well as critical awareness of AI's pedagogical and ethical implications.

Overall, the study highlights an evolving and promising landscape of AI tool adoption and integration in English preparatory education. It stresses the importance of addressing both the technological and human dimensions of AI in language learning to maximise educational benefits while fostering responsible use.

Despite these contributions, the study has several limitations. Self-reported survey data may introduce biases, and the unequal numbers of participants across groups could influence the findings. Additionally, the single-university setting limits generalizability. Expanding research to multiple institutions and international contexts would provide a broader perspective, while a longitudinal study could track how AI adoption and attitudes evolve over time.

Overall, this study highlights a dynamic and promising trajectory in the adoption and integration of AI tools within English preparatory education. It underscores the necessity of balancing the technological advancements of AI with ethical use to fully harness its educational potential. As AI continues to evolve and reshape language learning, it is imperative for educators, institutions, and researchers to collaborate in developing thoughtful, informed strategies that optimise AI's benefits while proactively addressing its challenges. This balanced approach will ensure that AI serves as a powerful, responsible catalyst for enhancing learner engagement, supporting academic success, and fostering autonomous language learning.

### **Ethical Declaration and Committee Approval**

This study adhered to publication ethics and received ethical approval from the Ethics Committee of the Çanakkale Onsekiz Mart University's School of Graduate Studies with approval numbers E-84026528-050.01.04-

2300111702 and E-84026528-050.01.04-2300319771 for the first and the second wave of data collection, respectively.

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### **Yabancı Dil Öğreniminde Yapay Zeka: İngilizceyi Yabancı Dil Olarak Öğrenen Öğrenciler Arasındaki Değişen Kullanım Uygulamaları, Algılar ve Eğitim İhtiyaçları**

#### **Öz**

Yapay zeka (YZ), yabancı dil eğitimini giderek daha fazla etkilemekte ve öğrenciler bu teknolojiyi kademeli olarak öğrenme süreçlerine entegre etmektedir. Bu çalışma, Türkiye'deki bir üniversitede İngilizceyi yabancı dil olarak öğrenen öğrencilerin YZ araçlarına ilişkin kullanım kalıplarını, algılarını ve eğitim ihtiyaçlarını incelemektedir. Nicel ve nitel yöntemlerin birlikte kullanıldığı kesitsel tarama desenine sahip araştırmada, veriler iki aşamalı yapılandırılmış anket yoluyla toplanarak zaman içindeki değişimler, betimsel istatistikler ve tümevarımsal içerik analizi yöntemleriyle analiz edilmiştir. Bulgular, özellikle kelime bilgisi, dil bilgisi ve yazma desteği konularında YZ araçlarının kullanımının arttığını; ikinci aşamada sohbet botları ve yazma asistanlarına yönelik kullanımın belirginleştiğini göstermektedir. Öğrenciler YZ'nin dil becerilerini ve akademik başarıyı artırmadaki rolünü takdir etmekle birlikte, etik sorunlar, aşırı bağımlılık ve eleştirel düşünme üzerindeki olası olumsuz etkiler konusunda endişelerini dile getirmiştir. Zamanla, öğrenciler YZ'ye daha olumlu yaklaşmış ve etik rehberlik, beceri geliştirme ve yapılandırılmış ders entegrasyonu ihtiyacını vurgulamıştır. Çalışma, YZ'nin dil eğitiminde etkili ve sorumlu kullanımı için öğretmen eğitimi, öğrenci farkındalığı ve kurumsal desteğin önemine dikkat çekmektedir.

*Anahtar kelimeler:* Yabancı dil öğreniminde yapay zeka, EFL öğrencilerinin YZ algıları, YZ araçlarının kullanım kalıpları, YZ'nin müfredata entegrasyonu, eğitim ihtiyaçları.