

Developing Speaking Fluency through AI-Powered Applications for Undergraduate EFL Students in Kurdistan

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Abstract

This research investigated the development of speaking fluency among undergraduate students through the use of AI-powered applications at universities in Kurdistan. In response to evolving educational technology, AI tools have become valuable resources for enhancing language-learning experiences. The study involved 105 participants from four universities who engaged with various AI applications designed to improve their speaking skills. Using a mixed-method approach, the research examined how these tools supported students in practicing and refining their language abilities in interactive environments, providing immediate feedback and opportunities for self-directed learning. This approach helped students improve pronunciation, speech patterns, and overall confidence in real-life communication. The findings revealed that most EFL students held positive views of AI-powered applications, reporting enhanced learning experiences, improved speaking confidence, and reduced anxiety. Conversation practice emerged as the most helpful feature, followed by vocabulary building and pronunciation feedback. Students expressed that AI tools made language practice more enjoyable and effective, encouraging consistent use and recommendations to peers. The research highlights the significant role of AI-powered applications in fostering speaking fluency and emphasizes their potential to create engaging, supportive environments in EFL education, offering valuable insights for educators and universities in Kurdistan.

Keywords— AI, Artificial Intelligence, EFL, English as a Foreign Language, Speaking Fluency, Undergraduate Students.

I. INTRODUCTION

1.1 Background of the Study

Recent advancements in artificial intelligence (AI) have introduced powerful tools for improving EFL learners' speaking skills. Applications like ELSA Speak and ChatGPT use speech recognition and instant feedback to enhance pronunciation, fluency, and personalized learning (Karim et al., 2023; Widyasari & Maghfiroh, 2023). Studies show that AI-mediated speaking assessments improve students' communication skills and confidence (Abdulhussein Dakhil et al., 2025). Furthermore, AI and ICT tools create engaging learning

experiences that foster continuous improvement (Madhavi et al., 2023). AI also enhances students' attitudes toward language learning by offering adaptive and interactive experiences (Cường, 2025).

In Kurdistan, traditional language education often lacks the technological integration needed for developing speaking fluency. AI-powered applications offer a promising solution by providing students with on-demand speaking practice and real-time feedback (CAFE, 2025). However, challenges such as accessibility, digital literacy, and teacher training must be addressed. Research on the role of AI in language education can assist educators and

policymakers in implementing these tools effectively to support EFL learners in the region (Qassrawi et al., 2024).

1.2 Problem Statement

Traditional speaking practice methods in EFL classrooms often lack interactivity and personalization, making it difficult for students to develop fluency and confidence. Many educational settings still rely on repetitive drills and limited teacher-student interactions, which do not provide sufficient real-life speaking opportunities. AI-powered applications like ELSA Speak and ChatGPT address these gaps by offering interactive, speech-recognition-based learning environments that provide instant feedback and personalized practice (Karim et al., 2023; Widyasari & Maghfiroh, 2023). Research indicates that AI-mediated speaking assessments significantly improve pronunciation, fluency, and students' willingness to communicate, making these tools a valuable addition to EFL education (Abdulhussein Dakhil et al., 2025).

Despite the potential of AI in language learning, many EFL students, particularly in Kurdistan, have limited access to such interactive tools. Traditional education systems often lack the technological infrastructure needed to integrate AI-based learning solutions effectively (CAFE, 2025). Additionally, factors such as digital literacy, teacher training, and internet accessibility create barriers to widespread adoption (Qassrawi et al., 2024). Addressing these challenges is crucial for leveraging AI's full potential in enhancing EFL speaking practice. By integrating AI-powered applications into language curricula, educators can offer students more personalized, engaging, and effective speaking opportunities, ultimately improving their language proficiency.

1.3 Research Objectives

- i. To investigate how AI applications improve speaking fluency.
- ii. To explore students' perceptions of AI-powered tools in language learning.
- iii. To identify the benefits and challenges of using AI tools for speaking practice.

1.4 Research Questions

RQ1: How do AI-powered tools enhance speaking fluency for EFL students at Kurdistan

universities?

RQ2: What are the key features of AI applications that support speaking practice?

RQ3: What are the students' experiences and challenges when using these tools?

Significance of the Study

This study contributes significantly to the integration of artificial intelligence (AI) into English as a Foreign Language (EFL) curricula. By investigating the role of AI-powered applications in enhancing speaking fluency, the research offers valuable insights for educators, universities, and policymakers in Kurdistan. It highlights how AI tools can be effectively used to create more interactive, personalized, and engaging language learning experiences, thus addressing gaps in traditional teaching methods. Furthermore, the study aims to support the development of innovative educational strategies that align with the growing need for technological integration in higher education.

1.5 Scope and Limitations

The scope of this study is limited to undergraduate EFL students in Kurdistan, focusing specifically on their experiences and improvements in speaking fluency through the use of AI-powered applications. The research primarily examines tools such as ChatGPT, ELSA Speak, and Gemini, which are selected for their speech recognition, real-time feedback, and adaptability features. However, the study does not cover other emerging AI technologies or broader aspects of language learning beyond speaking skills. Factors such as varying levels of digital literacy, access to technology, and different learning environments among students may also influence the findings.

II. LITERATURE REVIEW

2.1 AI in Language Learning

Artificial Intelligence (AI) has transformed the landscape of language education, particularly for learners of English as a Foreign Language (EFL). In recent years, AI-driven tools such as ChatGPT, ELSA Speak, and similar platforms have reshaped traditional pedagogical approaches by offering innovative, learner-centered solutions to enhance speaking skills. These tools leverage advanced machine learning algorithms to analyze speech, provide real-time feedback, and tailor learning experiences to individual users. For instance, ELSA Speak utilizes automatic speech recognition (ASR) to assist learners in refining their pronunciation, while ChatGPT engages users in simulated dialogues to promote fluency and conversational competence.

A growing body of research has highlighted the effectiveness of AI in language learning. Zou et al. (2020) underscore AI's capacity to support English for Academic Purposes (EAP) speaking skills by facilitating interactive practice and personalized feedback. This level of

individualization not only improves technical skills but also enhances learner motivation and engagement. Guo and Wang (2025) found that AI tools positively influence students' emotional experiences and academic involvement, resulting in increased confidence during oral tasks. From personal teaching experience, I have observed that students who regularly use AI-based applications often become more confident speakers, unburdened by fear of making mistakes in public. For example, one of my students who was initially reluctant to speak in class used ELSA Speak privately and gradually gained the confidence to engage in group discussions.

2.2 Speaking Fluency and AI

Speaking fluency, a core component of language proficiency, encompasses pronunciation, vocabulary usage, grammatical accuracy, and the ability to express ideas smoothly and confidently. Developing fluency requires consistent exposure to authentic language, sustained practice, and immediate feedback features readily available through AI-powered platforms.

AI applications provide structured and flexible practice environments, allowing learners to progress at their own pace. These tools often include features that track performance over time, enabling learners to monitor their progress and work on specific areas of weakness. Xu and Wang (2024) reported that AI-based platforms significantly boost learners' speaking proficiency and overall language performance. Likewise, Alshumaimeri and Alshememry (2023) emphasized the role of AI in enhancing speaking fluency and reducing learners' anxiety.

From a practical standpoint, tools like ELSA Speak and ChatGPT have proven to be invaluable. For instance, a student of mine who struggled with particular English sounds showed notable improvement after a few weeks of targeted practice using ELSA Speak. Similarly, Zou and Wang (2024) demonstrated the impact of EAP Talk, an AI-driven speaking assessment platform, in reinforcing speaking skills. These findings suggest that AI-mediated learning environments are effective in fostering oral fluency, confidence, and self-directed learning.

2.3 Studies on EFL Contexts in Kurdistan

The Kurdish EFL context presents distinct challenges, especially in developing speaking fluency. Limited exposure to English in daily life, coupled with classroom practices that emphasize grammar and reading over speaking, often leaves students underprepared for real-world communication.

Many students in Kurdistan also face anxiety when speaking in front of peers, which further impedes

their progress. AI-powered tools provide a non-judgmental and private space for learners to practice, enabling them to gain confidence without the fear of making mistakes in public.

Although technology integration in Kurdish universities is increasing, the adoption of AI-powered language learning tools remains limited. Qassrawi et al. (2024) identified the potential of AI applications to improve speaking proficiency among EFL learners in higher education, yet research specific to the Kurdish context is scarce. At Salahaddin University, for instance, students have expressed dissatisfaction with traditional methods, citing a lack of practical speaking experience. One student noted that, despite several years of English instruction, she was still unable to hold a basic conversation. These concerns point to the urgent need for more effective, technology-enhanced speaking interventions. Investigating the role of AI tools in such contexts can offer valuable insights into how they might be integrated into local curricula to address learners' specific needs.

2.4 Gaps in Existing Research

Despite promising developments, several gaps remain in the literature regarding the integration of AI in EFL speaking instruction, particularly within Kurdistan. Most existing studies focus on global contexts, offering limited insights into how AI affects Kurdish learners specifically. Although tools like ChatGPT and ELSA Speak have been widely studied in East Asia and the West, little research has explored their use in Kurdish higher education.

Furthermore, there is a lack of focused inquiry into how AI supports the development of speaking fluency among undergraduate students. While researchers such as Fathi et al. (2024) and Yuan and Liu (2025) have examined how AI enhances learner engagement and motivation, fewer studies address its direct impact on oral fluency. Given the rising demand for English proficiency in both academic and professional domains, there is a pressing need for studies that evaluate how AI tools can be culturally and pedagogically adapted for Kurdish learners. Future research should consider these variables to inform more inclusive and effective language education strategies in the region.

III. METHODOLOGY

3.1 Research Design

This study adopted a mixed-methods research design, integrating both qualitative and quantitative approaches to explore the impact of AI on speaking fluency. The combination of methods allowed us to gather measurable data through surveys while also capturing deeper, more personal insights through interviews and focus group discussions. By using this design, we aimed to achieve a well-rounded understanding of participants' experiences and perceptions regarding AI tools and their influence on spoken language development.

3.2 Participants

The participants for this study were 105 students drawn from four universities: Cihan University, Nowruz University, Duhok University, and the American University. For the qualitative part, all participants completed a set of open-ended questions, providing valuable opinions and reflections about AI's impact on their speaking skills. For the quantitative part, five participants were selected for face-to-face interviews, during which their speaking fluency was assessed through direct interaction, allowing for real-time evaluation and recording of their oral performance.

3.3 Data Collection Tools

Data collection was carried out using surveys and interviews to ensure both breadth and depth in the information gathered. Surveys contained Likert scale and multiple-choice questions, enabling statistical analysis of participants' attitudes and experiences. Semi-structured interviews and focus group discussions were also conducted, allowing participants to elaborate on their experiences with AI tools in speaking practice. This mixed approach provided a rich set of data to better understand the relationship between AI use and speaking fluency development.

3.3.1 Likert-Scale Survey

The Likert-scale survey was designed to measure participants' perceptions of AI's role in enhancing their speaking fluency, with responses ranging from strong agreement to strong disagreement.

3.3.2 Questionnaire

The structured questionnaire gathered demographic information and specific experiences related to AI usage, offering both multiple-choice and short-answer questions.

3.3.3 Interview

Semi-structured interviews allowed for deeper exploration of individual participants' perspectives, giving them the opportunity to elaborate on their personal experiences, challenges, and improvements observed through AI-assisted speaking practice.

3.4 Data Analysis

The collected data was analyzed using both quantitative and qualitative methods. Survey responses were subjected to statistical analysis, focusing on patterns and trends in participants' perceptions of AI's role in improving fluency. For the qualitative data, thematic analysis was used to identify recurring themes and insights from interviews and focus groups. Together, these methods allowed for a comprehensive and balanced interpretation of the study findings.

3.5 Ethical Considerations

Ethical standards were rigorously maintained throughout the research process. Participants were informed about the nature and purpose of the study and provided their consent before participating. Measures were taken to ensure the anonymity and confidentiality of all participants, with personal information securely protected and used solely for research purposes. The study adhered to ethical guidelines to respect participants' rights and dignity.

IV. RESULTS AND DISCUSSION

This chapter presents the results of the study and discusses their significance. It analyzes the data collected on the use of AI-powered applications for improving speaking fluency among undergraduate students. The findings are interpreted in light of the research objectives, highlighting key improvements, challenges, and students' perceptions of AI tools in language learning.

4.1 Analysis of Survey Data from Questionnaires

1. Which AI-powered applications have you used to improve your English speaking skills?

104 responses

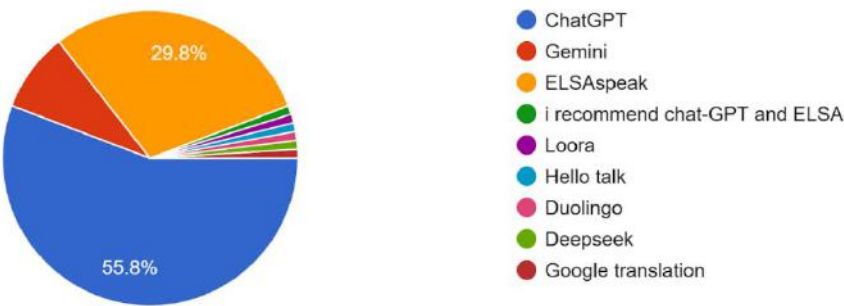


The survey results indicated that 69.4% of participants have utilized ChatGPT to enhance their English-speaking skills, making it the most popular AI tool for this purpose. A smaller proportion of respondents

reported using Gemini (18.5%), ELSA Speak (3.2%), and Duolingo (3.2%). Additionally, some participants (2.1%) stated that they have not used any AI applications for speaking practice, while 1.1% explicitly mentioned that they do not rely on AI tools for this purpose. Other less common applications, such as Loora and Pome, were each used by 1.1% of respondents.

2. Which AI-powered application would you recommend to a friend to improve speaking skills?

104 responses

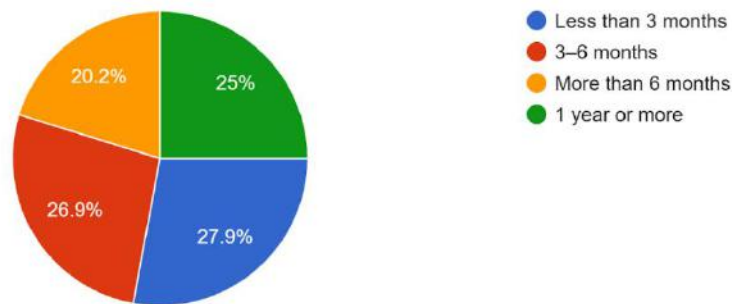


Most participants (55.8%) recommended ChatGPT as the AI-powered app to use for improving speaking skills. Gemini came next, with 29.8% of participants suggesting it, while ELSA Speak and Duolingo were recommended by 4.8% and 1.9%,

respectively. A few respondents (2.9%) suggested combining ChatGPT and ELSA Speak for enhanced results. Additionally, Loora, Hello Talk, Deepseek, and Google Translation were recommended by 1.9% of participants each.

3. How long have you used AI-powered tools for practicing speaking?

104 responses

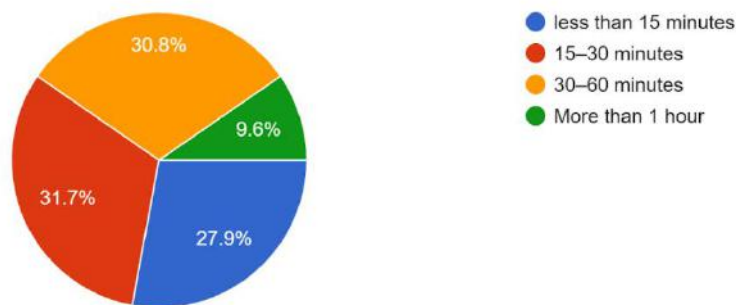


Participants provided varied responses regarding the duration of their use of AI-powered tools for speaking practice. The largest group, 27.9%, reported using these tools for less than 3 months. 26.9% of participants

indicated they had been using the tools for 3 to 6 months. 20.2% of respondents stated they had been using them for more than 6 months, while 25% had been using AI tools for a year or longer.

4. How much time do you spend daily on speaking practice using AI-powered applications?

104 responses

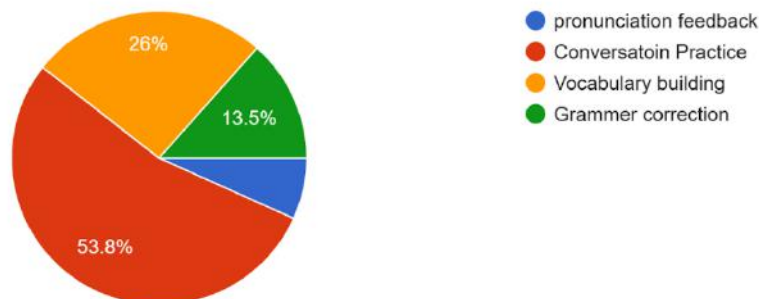


The time participants spend on AI-powered speaking practice varies. The largest proportion, 31.7%, spends between 15–30 minutes each day. A similar group, 30.8%, practices for 30–60 minutes daily. 27.9% of respondents engage with AI tools for less than 15 minutes,

while 9.6% practice for over an hour each day. These findings suggest that while most participants dedicate a moderate amount of time, there is still a notable percentage who either spend very little or a lot of time using the tools. This diversity in practice time reflects different learning habits and preferences among users.

5. Which feature of AI-powered applications do you find most helpful for improving speaking fluency?

104 responses

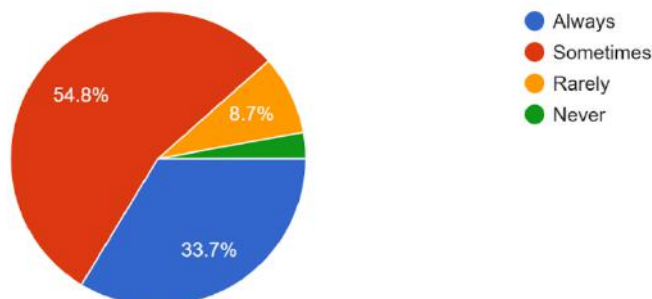


This chart shows the AI-powered features that participants found most helpful for improving their speaking fluency. The largest proportion of respondents (53.8%) indicated that conversation practice was the most beneficial feature. Vocabulary building followed with 26% of respondents highlighting its usefulness, while

pronunciation feedback was chosen by 13.5% of participants. Only 6.7% identified grammar correction as the most helpful feature for improving their speaking skills. The chart reflects the varying preferences for different features, with conversation practice emerging as the most valued tool.

6. Do you think AI-powered tools provide clear and easy-to-understand feedback for speaking practice?

104 responses

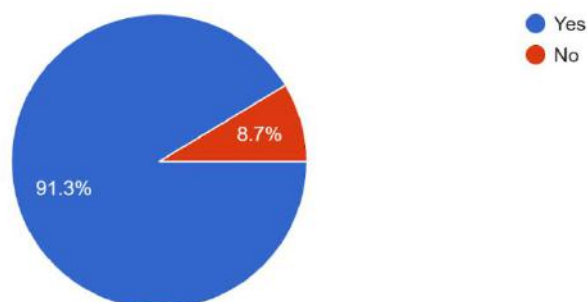


The survey reveals that while many people use AI-powered tools to practice speaking, the clarity of the feedback they receive varies. A significant 54.8% of users reported that AI tools always provide clear feedback, while 87% stated that they receive clear feedback sometimes. On

the other hand, 33.7% of participants felt that AI tools rarely offer clear feedback, and 7% mentioned that they never receive understandable feedback. This indicates a mixed perception of the effectiveness of AI feedback in improving speaking skills.

7. Have AI tools helped you feel more confident when speaking English?

104 responses

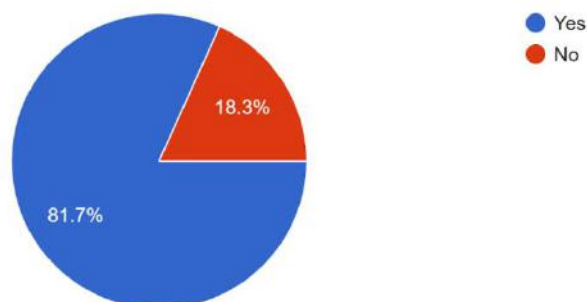


The survey results indicate that the majority of users did not experience a boost in their confidence after using AI tools for speaking practice. While only 8.7% reported feeling more confident, a striking 91.3% felt no change in their self-assurance. This suggests that despite the widespread use of AI tools, they may not effectively

address the psychological barriers or provide the motivational support needed for learners to gain confidence in their speaking abilities. Further exploration into how AI tools can be enhanced to improve confidence would be beneficial.

8. Have you noticed any improvement in your speaking fluency after using AI tools ?

104 responses

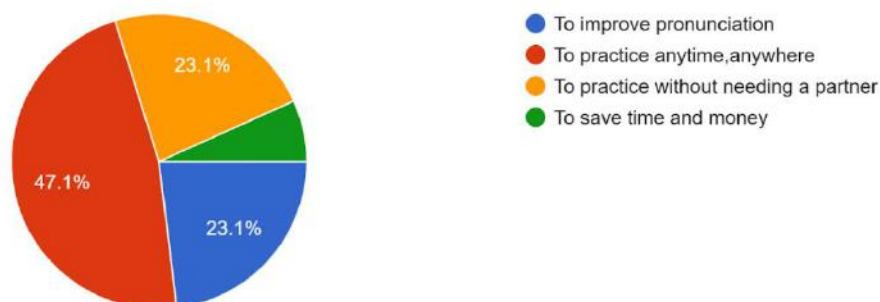


The findings indicate that AI tools had limited impact on enhancing speaking fluency for most users. Only 18.3% of participants reported an improvement in their fluency, while the remaining 81.7% experienced no

noticeable change. This suggests that while AI tools may offer some support, they may not be sufficient on their own to significantly improve fluency. Further research into how these tools can be better tailored to address the specific needs of learners could help enhance their effectiveness in promoting fluency development.

9. What motivates you to use AI-powered applications for speaking fluency?

104 responses

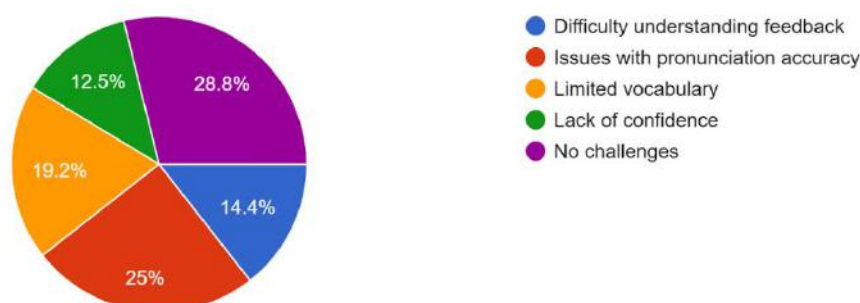


The survey revealed that AI-powered applications serve various purposes for users when practicing speaking fluency. 23.1% of users prefer them for improving pronunciation, while a larger portion, 47.1%, appreciate

the flexibility to practice at any time and from anywhere. Additionally, another 23.1% value the independence these tools offer, enabling practice without the need for a conversation partner. Lastly, some users choose AI tools for their convenience, with the goal of saving both time and money on language practice.

10. What challenges have you faced while using AI tools for speaking practice?

104 responses

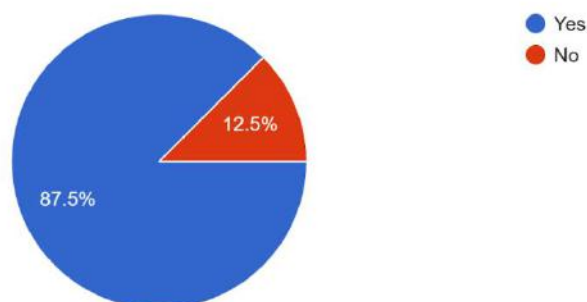


The survey highlights several challenges users face when using AI tools for speaking practice. 12.5% of respondents struggle with understanding the feedback provided by the tools, while 28.8% report difficulties with

pronunciation accuracy. Another 19.2% encounter challenges due to a limited vocabulary, and 14.4% feel hindered by a lack of confidence. On a positive note, 25% of users reported having no challenges at all while using these AI-powered applications.

11, Do you plan to continue using AI-powered tools for speaking practice in the future ?

104 responses

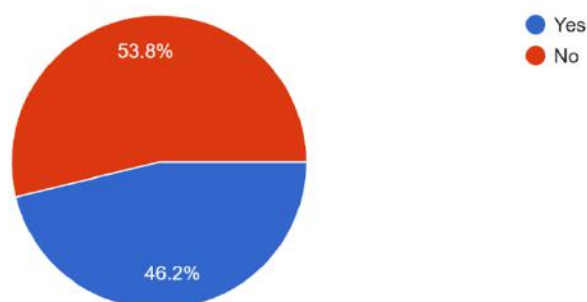


The majority of respondents (70.2%) plan to continue using AI-powered tools for speaking practice in the future. However, a smaller group (29.8%) expressed no intention to keep using these tools. This suggests a strong

preference for AI solutions among many, yet some users may seek other methods or feel uncertain about AI's long-term effectiveness. It highlights the mixed opinions about the role of AI in language learning, with some embracing its benefits while others remain hesitant.

12. Do you think AI-powered applications are better than traditional speaking practice methods (e.g., classroom speaking)?

104 responses

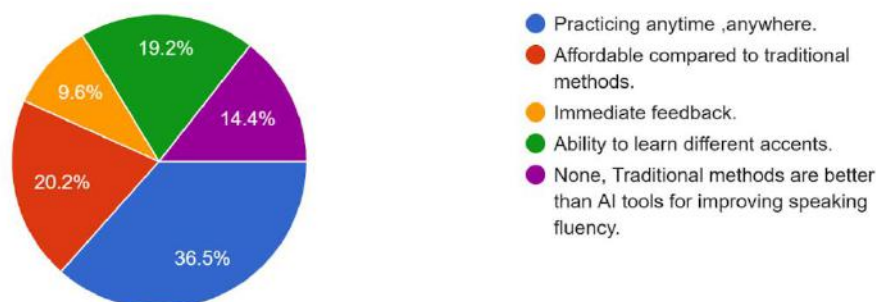


This pie chart shows the distribution of opinions regarding the effectiveness of AI-powered applications compared to traditional speaking practice methods. The

majority of respondents (70.2%) believe that AI tools are more effective, while a significant portion (29.8%) disagrees, indicating a preference for traditional methods. This data highlights the diverse perspectives learners have on improving their speaking skills.

13. What makes AI tools better than traditional methods for improving speaking fluency?

104 responses

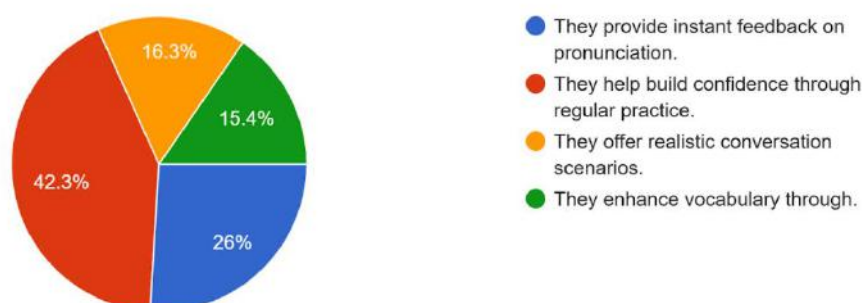


The majority of respondents (42.7%) highlight the ability to practice anytime and anywhere as the greatest advantage of using AI-powered tools. A smaller portion (24.8%) values the instant feedback on pronunciation and

grammar that these tools provide. Additionally, 18.8% appreciate the variety of topics available for practice, while 14.9% find the interactive and engaging learning experience to be a key benefit. This reflects the diverse reasons people favor AI tools in their language learning journey.

14. How do AI-powered tools contribute to improving your English speaking fluency ?

104 responses

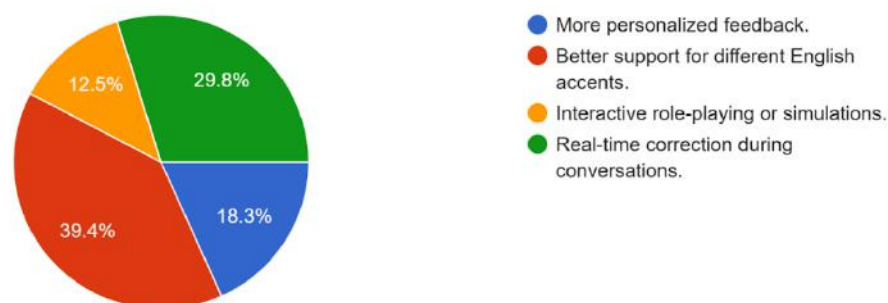


This chart shows that 30.4% of users view instant feedback on mistakes as the main advantage of AI-powered speaking tools. Personalized learning paths

appeal to 25.5% of users, while 24.5% appreciate the flexibility to practice at any time. Additionally, 19.6% believe that reduced language anxiety is the biggest benefit.

15. What additional features would improve your experience with AI-powered applications for speaking practice?

104 responses



This chart shows that 31.4% of users favor more personalized feedback to enhance their speaking practice. Meanwhile, 29.5% prefer topic tailoring and realistic

simulations. Another 20.0% are interested in gamification or role-playing activities, and 19.0% value the ability to use AI tools offline or with minimal data usage.

4.2 Likert Scale Survey Analysis

Table:1 Likert Scale Survey Analysis

Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Effectiveness of AI tools for improving speaking fluency	12.5	42.3	25	14.4	12.5
Practicing with AI tools makes learning English speaking skills more enjoyable	13.5	45.2	18.3	15.4	7.7
Duration of using AI-powered tools for speaking practice	27.9 (Less than 3 months)	26.9 (3–6 months)	20.2 (More than 6 months)	25 (1 year or more)	0
Time spent daily on AI-assisted speaking practice	27.9 (Less than 15 min)	31.7 (15–30 min)	30.8 (30–60 min)	9.6 (More than 1 hour)	0
AI tools help feel more confident speaking English with others	15.4	45.2	24	15.4	7.7
Comfort using AI applications for speaking practice without fear of judgment	26	33.7	25	11.5	3.8
Most helpful AI feature for improving speaking fluency	53.8 (Conversation Practice)	26 (Vocabulary Building)	13.5 (Pronunciation Feedback)	6.7 (Grammar Correction)	0 (All Skills)
AI applications assist in overcoming speaking anxiety and hesitation	20.1	40.4	23.1	10.6	5.8
Would recommend AI-powered applications to other EFL students to improve their speaking fluency	14.4	38.5	26	11.5	9.6

Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
AI-powered applications can play a significant role in improving English speaking fluency among EFL students in Kurdistan	20.2	39.4	21.2	11.5	9.6

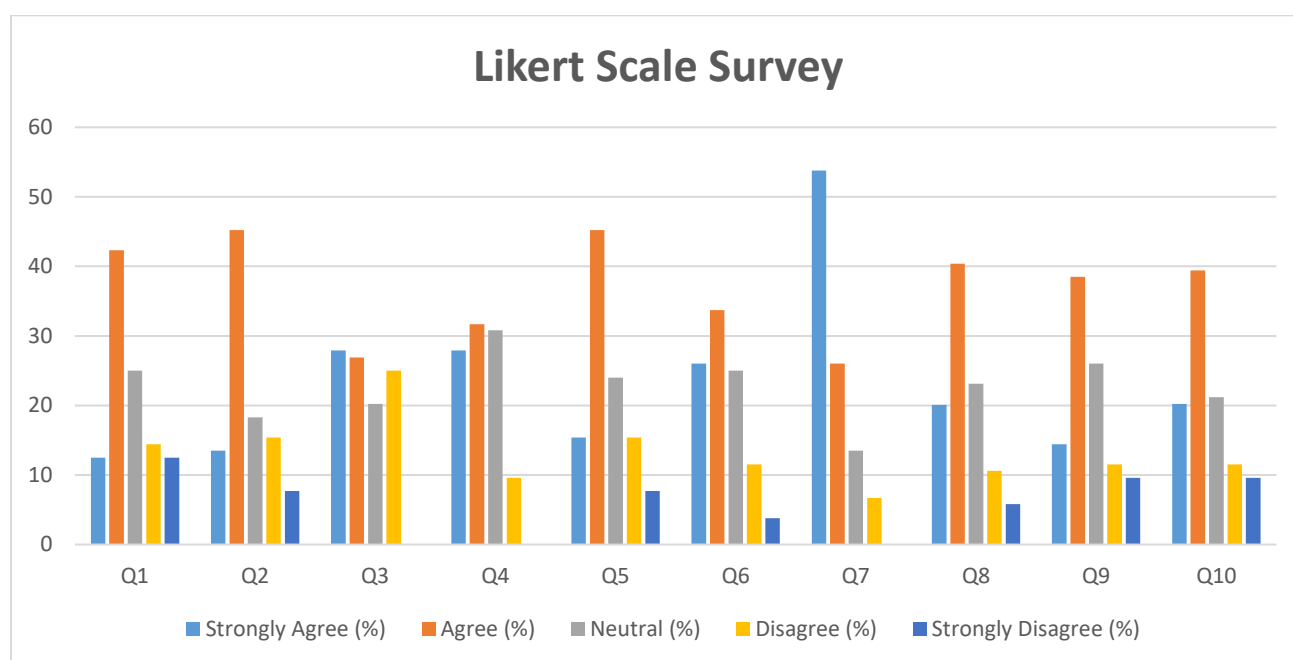


Fig.1 Likert Scale Survey Analysis

The survey results show that most EFL students have a positive view of using AI-powered applications to improve their English speaking fluency. A large percentage agreed that AI tools are effective (42.3%) and make learning more enjoyable (45.2%). Many students had been using AI tools for a short period — less than 3 months (27.9%) or 3–6 months (26.9%) — and most practiced speaking for 15–30 minutes (31.7%) or 30–60 minutes (30.8%) daily. A good number of participants reported that AI applications boosted their confidence in speaking English (45.2% agree, 15.4% strongly agree) and made them feel comfortable practicing without fear of judgment (33.7% agree, 26% strongly agree).

In addition, conversation practice (53.8%) was identified as the most helpful feature for improving speaking fluency, followed by vocabulary building and pronunciation feedback. Many students felt that AI tools helped reduce their speaking anxiety and hesitation (40.4% agree, 20.1% strongly agree). A significant portion said they would recommend AI applications to other learners (38.5% agree, 14.4% strongly agree). Finally, most respondents

believed that AI-powered applications could play an important role in enhancing English speaking fluency among EFL students in Kurdistan (39.4% agree, 20.2% strongly agree).

V. CONCLUSION

5.1 Findings

This study investigated the role of Artificial Intelligence (AI)-powered applications in enhancing the speaking fluency of undergraduate EFL students in Kurdistan. The findings revealed that AI tools significantly contributed to students' ability to speak English more fluently and confidently. Participants reported that engaging with AI applications made the language learning process more interactive, motivating, and accessible beyond traditional classroom settings. Immediate feedback, opportunities for self-directed practice, and exposure to authentic language use were key factors supporting fluency development. Students also noted a boost in their confidence, expressing that AI-based practice allowed them

to refine pronunciation, improve speech patterns, and communicate more freely without fear of judgment. Overall, the study highlights the positive impact of integrating AI into language learning, particularly in fostering speaking fluency and learner autonomy.

5.2 Implications

The outcomes of this research carry important implications for both educators and higher education institutions:

5.2.1 For Educators:

Language instructors are encouraged to incorporate AI-powered applications into their teaching methodologies. By offering real-time feedback, simulated conversation opportunities, and personalized learning paths, AI tools can supplement traditional speaking activities effectively. Professional development and training for teachers on how to select and use appropriate AI tools are essential to optimize the integration of technology into pedagogical practices. Educators must also ensure that the selected applications align with learning objectives and meet the diverse needs of their students.

5.2.2 For Universities:

Higher education institutions should acknowledge the transformative potential of AI in language education. Universities are advised to integrate AI-assisted learning into curriculum design, particularly in speaking and communication courses. Providing access to updated AI resources, developing specialized courses on technology-enhanced language learning, and investing in faculty training programs will help create a more innovative and supportive learning environment. Encouraging AI adoption can bridge resource gaps, enhance student engagement, and prepare learners for real-world communication demands.

5.3 Limitations of the Study

While the findings offer valuable insights, several limitations must be acknowledged:

- i. The study focused solely on undergraduate EFL students in Kurdistan, limiting the generalizability of the results to other contexts.
- ii. Only a select group of AI applications was explored, and many other available tools were not examined, potentially overlooking different outcomes.
- iii. The study captured short-term improvements rather than assessing the long-term impact of AI usage on speaking fluency.

5.4 Recommendations for Future Research

Based on the identified limitations, several directions for future research are proposed:

- i. Expand the focus beyond speaking skills to explore how AI can enhance other language domains such as listening, reading, and writing.
- ii. Investigate learners' perceptions of specific AI features, such as feedback accuracy, speech recognition reliability, and gamification elements, to better understand the factors driving motivation and improvement.
- iii. Explore the challenges faced by students and teachers in implementing AI tools, offering strategies for overcoming potential barriers.

The integration of AI-powered applications into EFL education marks a promising step in developing speaking fluency. This study showed that AI tools provide engaging, accessible, and supportive environments for learners, offering personalized feedback, fostering autonomy, and enhancing confidence. AI should be seen as a valuable supplement to human instruction, enriching language-learning experiences, especially in regions with limited access to native speakers. Despite the study's limitations, the positive outcomes highlight AI's potential to strengthen language education. As technology advances, future research should continue exploring innovative, sustainable ways to integrate AI, helping EFL learners build the fluency and communication skills needed for global success.

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