

## EXPLORING ISLAMIC UNIVERSITY STUDENTS' ACCEPTANCE OF AI INTEGRATION IN ENGLISH SPEAKING PRACTICE: A TAM-BASED STUDY

Zakky Yavani, Rudi Hartono, Rahayu Puji Haryanti, Sri Wuli Fitriati  
[zakkyavani@students.unnes.ac.id](mailto:zakkyavani@students.unnes.ac.id), [rudi.hartono@mail.unnes.ac.id](mailto:rudi.hartono@mail.unnes.ac.id),  
[rahayu\\_PH@mail.unnes.ac.id](mailto:rahayu_PH@mail.unnes.ac.id), [SriWuli.Fitriati@mail.unnes.ac.id](mailto:SriWuli.Fitriati@mail.unnes.ac.id)

Universitas Negeri Semarang, Indonesia

### Abstract

The integration of artificial intelligence (AI) into language education has created new opportunities for English as a Foreign Language (EFL) learners, especially in speaking practice, where traditional classrooms often provide limited opportunities, delayed feedback, and high-anxiety conditions. Yet, few studies have examined AI acceptance within Muslim-majority higher education contexts where cultural and institutional factors may influence adoption. Guided by the Technology Acceptance Model (TAM), this study investigated English Language Teaching (ELT) students' perceptions of usefulness (PU), ease of use (PEOU), attitude (ATT), and intention to use (ITU) AI tools for speaking practice at an Islamic university in Indonesia. A quantitative descriptive survey design was employed with 110 third-semester students, using a TAM-based questionnaire, analyzed through descriptive statistics. Findings indicated consistently high PU, particularly in enhancing confidence, fluency, vocabulary, and grammar, as well as high PEOU, reflecting the intuitive nature of AI tools. Attitudes were uniformly favorable, while ITU, though high, was slightly lower and more varied, suggesting that external factors such as affordability, infrastructure, and cultural concerns may limit adoption. The study affirms TAM's explanatory power while underscoring its limits in fully capturing contextual influences. Its novelty lies in applying TAM within an Islamic higher education setting, contributing theoretical, pedagogical, and policy insights. Limitations include the single-site scope, reliance on self-reported data, and cross-sectional design, indicating the need for multi-institutional, longitudinal, and extended-TAM research.

*Keywords: Artificial Intelligence (AI), Technology Acceptance Model (TAM), EFL speaking practice, Islamic higher education*

## INTRODUCTION

The ability to speak English is an important aspect in the learning of English language in the field of EFL for students in the university. Teachers have recognized in research that students do not speak very much due to high levels of anxiety about speaking. Conventional classrooms do not offer students the ability to receive enough feedback in real time (Kim et al., 2021; Shazly, 2021; Sumakul et al., 2022). To counter these problems, AI systems such as chatbots, automated speech recognition, and pronunciation apps offer significant gains by providing real time feedback, enabling the students to practice in a low anxiety environment (Montenegro-Rueda et al., 2023; Kohnke, Moorhouse, & Zou, 2023; Roe, Renandya, & Jacobs, 2023).

In their research on educational technology, Grassini (2023) and Shaikh et al. (2023) note how Venkatesh & Davis (1996) expanded on the foundational work of Davis (1989) in the development of the Technology Acceptance Model (TAM) to explain how students engage with technology. The model has become almost ubiquitous in the discourse and research surrounding educational technology. While TAM itself has been the subject of research, studied and restudied innumerable times, the theory focuses on the two of its most vital subdivisions, Perceived Usefulness and Perceived Ease of Use (PEOU) (PU). The purpose of these subdivisions in the framework is to help define the attitudes and behavioral intention with which users approach, and in my case, myself,

employ the studied technology (Camilleri & Falzon, 2021; Ansas et al., 2024; Chen, Liu, & Liu, 2024). As is the case with an expanding body of literature on AI-assisted language learning, TAM has proven its worth, demonstrating that students' willingness to employ AI technology is often determined by its perceived effectiveness and user friendliness (Azzahra et al., 2024; Firdaus et al., 2025; Barakat et al., 2025).

Based on recent studies, perceptions of AI tools intended for language learning are broadly supportive. Students tend to view mobile AI apps for language learning and chatbots as helpful tools for fluency, pronunciation, grammar, and vocabulary, enjoying their ease of access and non-threatening environment (Nisa et al., 2023; 2024; Dehghani & Mashhadi, 2024). Systematic reviews on ChatGPT and similar AI tools also affirm that perceived usefulness (PU) profoundly influences intention to use, while perceived ease of use (PEOU) mostly serves to bolster user confidence in Mahapatra (2024); Kohnke et al. (2023); Zou, Reinders, Thomas, and Barr (2023). These studies indicate that AI could possibly overcome longstanding challenges in speaking practice through personalization and near constant availability (Montenegro-Rueda et al., 2023; Huang et al., 2023).

Results still demonstrate inconsistency with these findings. For instance, some studies have reported strong effects of PU on adoption while showing weaker or negligible effects for PEOU (Chen et al., 2024; Ansas et al., 2024; Firdaus et al., 2025). Others suggest that TAM, on its own, may not address the full intricacies of AI adoption in the language classroom and instead broaden the analysis to include trust, ethics, pedagogy, or emotions (Barakat et al., 2025; Dehghani & Mashhadi, 2024; Grassini, 2023). In addition, practical difficulties with recognition of voice, paying the subscription, accessing the Internet, and lacking culturally appropriate materials persist for learners (Belda-Medina & Kokošková, 2024; Duong et al., 2025; Shazly, 2021). These inconsistencies suggest that the issue has not been sufficiently researched in particular educational settings.

Within its Islamic universities, Indonesia has, in particular, limited empirical research regarding student perceptions on the usefulness and ease of use of AI tools for practicing speaking. Some studies at the local level have reviewed attitudes toward AIED in general, or on specific tools like ELSA Speak, but seldom utilize the TAM model, which is within a Muslim context of education. Even the presence of Islamic values and identity issues, for example, the degree to which the use of AI is consistent with religious and cultural norms, has been identified as an important but little explored issue in students' attitudes toward the use of AI in learning (Aini et al., 2024; Karolina et al., 2025). This highlights the novelty of examining TAM constructs within the unique cultural and religious setting of Islamic higher education.

This study addresses the gap by applying TAM to investigate third-semester ELT students' perceptions at an Islamic university in Indonesia, focusing specifically on PU and PEOU in relation to AI-supported English-speaking practice. By combining quantitative survey data with open-ended qualitative responses, the study aims to provide a comprehensive picture of how students evaluate AI tools, what challenges they encounter, and how cultural or religious considerations may influence their acceptance (Azzahra et al., 2024; Barakat et al., 2025; Firdaus et al., 2025). The contribution lies in offering empirical evidence that integrates TAM with contextual sensitivity to Islamic educational environments.

Theoretically, this study addresses the extension of TAM to in its rarely been used form (Ansas et al., 2024; Grassini, 2023). It also contributes practically to the culture in which AI-supported speaking tools speak to learner gaps and are designed and implemented (Belda-Medina & Kokošková, 2024; F. Z. Nisa et al., 2024; Zou et al., 2023). In the context of formulating policy, the study identifies the infrastructural, pedagogical, and ethical elements needed for the sustainable adoption of AI in Islamic universities (Aini et al., 2024b; Kohnke et al., 2023; Montenegro-Rueda et al., 2023).

## METHODS

This study employed a quantitative descriptive survey design to investigate how fifth-semester students in the English Language Teaching (ELT) department at an Islamic university perceive the usefulness and ease of use of AI-based applications in supporting their English speaking practice. The design was guided by the Technology Acceptance Model (TAM) as the theoretical lens. TAM,

originally developed by Davis (1989) and extended by Venkatesh and Davis (1996), has been widely recognized as a robust framework for examining user acceptance of technology through the constructs of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Recent studies in educational technology (Chiu, 2025; Scherer et al., 2019) further confirm TAM's explanatory power in the context of digital learning environments. In the domain of AI in language education, scholars have emphasized how learners' perceptions of usefulness and ease of use strongly influence their motivation and willingness to adopt AI-based tools (Huang, 2025; Zou et al., 2023). Drawing from these insights, the present study applies TAM to the context of English-speaking practice supported by AI tools.

## **Respondents**

The participants were 110 undergraduate students enrolled in the third semester of the ELT department at an Islamic university in Indonesia. As the population was relatively small and clearly defined, a total population sampling strategy was employed, ensuring that all eligible students were included in the study and experienced AI utilization in speaking practice. This strategy minimized selection bias and provided comprehensive insights into the perceptions of the entire cohort.

## **Instruments**

The data was collected through a self-direction questionnaire based on the TAM model (Davis 1989; Venkatesh & Davis 1996; Scherer et al 2019). The questionnaire was divided into three sections: biographical data, a 5-item Perceived Usefulness questionnaire (e.g. "I am able to use AI based applications to enhance my spoken English"), and a 5-item Perceived Ease of Use questionnaire (e.g. "I can learn to use AI based applications with ease"). All participants responded to the 5-item questionnaires using a 5-point Likert scale with 1 and 5 being the endpoints. In line with the AI-integrated language learning pedagogy (Zou et al., 2023; Huang et al 2023), the quantitative data was supplemented with a single open-ended question which served to illustrate the participants information relating to the application of AI based tools for practice in speaking lessons.

## **Data Collection Procedure**

Data collection was carried out in class using Google Forms. Before participation, the research purpose was clearly explained, and informed consent was obtained. Ethical principles were observed throughout the process, including voluntary participation, anonymity, and confidentiality of responses. The instruction to complete the questionnaire is explained in the class meeting as well as in the instructions within the form used.

## **Data Analysis**

The collected data were processed using SPSS version 27. The answer to the research questions included the use of descriptive statistics (means, standard deviation, and percentage) to summarize students' perceptions of the concepts of Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude toward Use (ATT), and Use Intention (ITU). The validity of the questionnaire item was assessed through item-total correlation and internal consistency reliability using Cronbach's alpha, with the requirement of 0.70 for acceptable reliability (Ary et al. 2019). Meanwhile, the open-ended questionnaire aims to complement the statistical findings.

## **Validity and Reliability**

The results of the instrument testing confirmed that all items for both PU and PEOU demonstrated adequate validity, with corrected item–total correlations exceeding 0.40. Reliability testing also indicated strong internal consistency. The PU scale achieved a Cronbach’s alpha of 0.84, while the PEOU scale produced an alpha of 0.86. When combined, the overall scale reached a Cronbach’s alpha of 0.88, demonstrating excellent reliability.

## FINDINGS

Table 1. Descriptive Statistics of AI Tool Use for English Speaking Practice

| Construct                    | Item | Statement (shortened)               | Mean* | SD*  | Interpretation |
|------------------------------|------|-------------------------------------|-------|------|----------------|
| Perceived Usefulness (PU)    | UU1  | AI tools improve my pronunciation   | 3.82  | 0.79 | High           |
|                              | UU2  | AI tools improve my fluency         | 3.87  | 0.80 | High           |
|                              | UU3  | AI tools expand my vocabulary       | 3.93  | 0.78 | High           |
|                              | UU4  | AI tools improve my grammar         | 3.93  | 0.78 | High           |
|                              | UU5  | AI tools provide useful feedback    | 3.98  | 0.72 | High           |
|                              | UU6  | AI tools increase my confidence     | 4.03  | 0.78 | High           |
| Perceived Ease of Use (PEOU) | EOU1 | AI tools are easy to use            | 4.00  | 0.72 | High           |
|                              | EOU2 | AI tools are simple to control      | 4.00  | 0.72 | High           |
|                              | EOU3 | AI tools are straightforward        | 4.00  | 0.72 | High           |
|                              | EOU4 | AI tools respond quickly            | 3.98  | 0.72 | High           |
| Attitude (ATT)               | ATT1 | Using AI for learning is good       | 4.03  | 0.78 | High           |
|                              | ATT2 | Using AI for study is favorable     | 4.03  | 0.78 | High           |
|                              | ATT3 | Using AI for education is positive  | 4.03  | 0.78 | High           |
|                              | ATT4 | Using AI for learning is useful     | 4.03  | 0.78 | High           |
|                              | ATT5 | Using AI for learning is worthwhile | 4.03  | 0.78 | High           |
| Intention to Use (ITU)       | ITU1 | I intend to use AI for learning     | 3.91  | 0.86 | High           |
|                              | ITU2 | I am going to use AI for study      | 3.91  | 0.86 | High           |
|                              | ITU3 | I have the intention to use AI      | 3.91  | 0.86 | High           |
|                              | ITU4 | I will use AI for education         | 3.91  | 0.86 | High           |

### 1. Perceived Usefulness (UU).

All six items are categorized as “High” with means between 3.82 and 4.03. The item with the highest score is “AI tools increase my confidence” ( $M = 4.03$ ,  $SD = 0.78$ ), which illustrates that alongside the linguistic advantages, students appreciate in what ways AI diminishes anxiety and enhances confidence when speaking. Improvement in vocabulary and grammar was also rated highly ( $M = 3.93$ ), which suggests students regard AI tools as not merely as phonetic fluency enhancers, but as supportive of wider linguistic competence. The dimension of usefulness reflects strong endorsement, coupled with low standard deviations ( $\sim 0.78$ ), indicating that there is a relative consensus among respondents.

### 2. Perceived Ease of Use (EOU).

Students rated AI tools as very easy to use, with all items clustered tightly around  $M = 4.00$ . The lowest is “AI tools respond quickly” ( $M = 3.98$ ), but still high. The uniformity of scores and small standard deviation (0.72) indicate stable perceptions of usability across the sample. This suggests that technical barriers are minimal and that students do not find the tools complicated, which supports TAM’s prediction that ease of use facilitates adoption.

### 3. Attitude toward Use (ATT).

Attitudinal measures scored among the highest, with every item averaging 4.03 ( $SD = 0.78$ ). The wording variations (good, favorable, positive, useful, worthwhile) converged into a uniformly positive attitude. This suggests that students not only recognize AI’s utility and ease of use but also

develop favorable evaluative judgments, aligning with TAM literature where PU and PEOU influence attitude, which in turn shapes intention.

#### 4. Intention to Use (ITU)

Although still “High,” intention to use AI tools ( $M = 3.91$ ,  $SD = 0.86$ ) is slightly lower compared to other constructs. The standard deviation is marginally larger, reflecting more varied responses among students regarding future use. This may suggest that while students find AI tools useful and easy, actual behavioral adoption could be influenced by external factors such as internet access, subscription costs, or institutional policies.

To complement the quantitative data the open-ended answers enriched the quantitative outcomes by shedding light on the students' encounters with the AI tool for practice. The students' responses generated four key themes, as shown in the table below

Table 2. Open-Ended Questionnaire Themes and Illustrative Quotes

| Theme                                | Findings                                                                                                                                                | Representative Quotes                                                                                                                                                      |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key Benefits</b>                  | AI chatbots are available anytime/anywhere, provide instant feedback, boost confidence, reduce anxiety, and provide varied practice topics.             | "I find it very helpful that AI chatbots are available anytime and anywhere... they help me expand my vocabulary and correct my grammar in real time."                     |
| <b>Challenges &amp; Limitations</b>  | Responses are sometimes unnatural, lack emotional depth, have technical barriers (internet, premium access), and have limited voice features.           | "One of the main challenges is that AI chatbots sometimes misunderstand the context or give unnatural responses."                                                          |
| <b>Comparison with Other Methods</b> | More accessible & less intimidating than tutors/native speakers, but less natural & contextual; AI best as a supplement.                                | "AI tools are more accessible and less intimidating than traditional methods... however, they lack the emotional and cultural depth that real human interaction provides." |
| <b>Future Intention to Use</b>       | The majority are very likely to continue using AI, but request improvements: accent adaptation, realistic voice interaction, and personalized feedback. | "Very likely... It would be helpful if AI could adapt better to different accents and levels of fluency."                                                                  |

The table above shows that students stressed the key advantages of the AI chatbots; they appreciated the opportunity to practice speech at their convenience, to receive instant feedback, and to promote their confidence without the fear of being judged for their poor language skills. A number of students pointed out that these tools not only assisted with grammar and pronunciation, but they also created a low-anxiety setting for language practice.

Students also pointed out a number of challenges and obstacles. Most people complained about the lack of emotionality and intonation, monotonous articulation, the high prices of the premium subscription, or the poor Internet connection. The lack of abundant voice-interaction features that can engage users is also seen as a barrier with respect to the user's ability to practice the speaking skill.

When compared with other approaches, students acknowledged that Artificial Intelligence is more readily available and less intimidating than speaking to a tutor or a native speaker. Still, they almost all agreed that AI interactions lack the culture, nuance, and freedom found in real human speech. For this reason, many students using AI tools to practice speaking English viewed the tools as an adjunct to rather than a replacement for the conventional approaches.

Ultimately, learners showed great predictive intentions towards the use of AI tools for speaking practice. A majority of respondents said they were very likely to use such tools as long as

the issues of accent adaptation, voice realism, and varying proficiency range personalized feedback were addressed.

Overall, the results indicated that students welcomed AI tools and found tremendous value in the ease of use of these tools. However, they were more concerned about the surrounding issues such as inadequate infrastructure, continual interaction with the real person, and more AI shortcomings.

## DISCUSSION

There are some aspects can be drawn from this study. First, The present study revealed that Islamic university students reported consistently high perceptions of AI tools across all constructs of the Technology Acceptance Model (TAM): Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Attitude toward Use (ATT), while Intention to Use (ITU) was slightly lower though still high. These findings reinforce the centrality of TAM constructs in shaping learners' acceptance of educational technologies, echoing previous validation studies which demonstrated that PU and PEOU are reliable predictors of positive attitudes and adoption behaviors in AI-assisted language learning contexts (Ansas et al., 2024; Azzahra et al., 2024; Barakat et al., 2025). The open-ended responses strengthened these results, as students explicitly highlighted AI's accessibility, real-time feedback, and ability to reduce speaking anxiety as central to their positive perceptions.

Second, Usefulness and linguistic benefits are clearly identified. Most students appreciated AI-driven tools especially in articulation, vocabulary, grammar and self-assurance. This supports findings that AI-driven chatbots and applications augment learners' speaking and pronunciation skills through individualized feedback and practice. Open-ended comments indicated that many valued AI because it could "correct mistakes instantly" and "help build confidence without fear of judgment," aligning with prior research on AI-driven chatbots (Belda-Medina & Kokošková, 2024; Shazly, 2021). Students in Indonesia, for example, using ELSA Speak and similar AI applications, also feel that such tools aid in vocabulary acquisition and speaking self-efficacy, underlining the fact that perceived usefulness is a powerful factor in motivational theories of language learning (Abimanto & Mahendro, 2023; Duong et al., 2025; W. Nisa & Sulaiman, 2025).

Third, AI confidence also registered highest among responses in this study, which is quite in line with the research that has found AI feedback helps decrease anxiety while providing a safe space to practice which allows learners to speak more and go beyond their comfort zone (Kohnke et al., 2023; Shazly, 2021; Sumakul et al., 2022). In the context of Islamic universities, where the cultural context may serve to increase learners' reluctance to communicate, tools for AI appear to have the role of affective mediators, strengthening the claim that in the Technology Acceptance Model, usefulness goes beyond the purely cognitive aspects (Aini et al., 2024b; Dehghani & Mashhadi, 2024).

Fourth, Ease of use and technical accessibility were interdependent factors. Ease of use was highly ranked and uniformly distributed, which demonstrates students' belief that AI tools are handy, easily manageable, and responsive. However, the open-ended responses revealed that some still struggled with issues such as unstable internet, premium subscriptions, and limited voice-interaction features. Beyond the context of the current study, numerous reports indicate that EFL students in countries such as Indonesia and Iran, as well as in various multinational contexts, perceive AI applications as user-friendly, which enhances their propensity to utilize these tools for learning (Ansas et al., 2024; Chen, 2021; Karolina et al., 2025). This trend with relative ubiquity with respect to region and methodology indicates the dominant assumption that barriers to the engagement of AI for learning applications is mainly a cognitive barrier is simplistic. Challenges and barriers are imminent to remind ourselves that, as surveyed in the literature, obstacles to engagement are far simpler, such as unreliable internet, subscription fees, or poor quality devices (Belda-Medina & Kokošková, 2024; Duong et al., 2025; Montenegro-Rueda et al., 2023).

Fifth, Attitude and evaluative judgments. The uniformly high scores for attitude indicate that students not only acknowledge AI's utility and usability but also evaluate it favorably in principle. Similar patterns were reported in multinational studies on ChatGPT acceptance, where students expressed overwhelmingly positive judgments toward using AI for academic tasks despite concerns about accuracy or ethics (Grassini, 2023; Shaikh et al., 2023). Such favorable attitudes

are critical, as TAM posits attitude as a mediating variable between perceptions (PU, PEOU) and behavioral intention (Davis, 1989; Venkatesh & Davis, 1996).

Sixth, Intention to use and contextual barriers. Despite positive perceptions and attitudes, intention to use was slightly lower and more varied among respondents. Such perception gaps concerning implementation and positive adoption have been reported in the literature without condition index such as institutional support, subscription costs, data privacy, and sociocultural aspects in bridging attitudinal use (Barakat et al., 2025; Dehghani & Mashhadi, 2024; Firdaus et al., 2025). In the case of Indonesia, infrastructural and cost factors have been repeatedly cited as barriers to the sustained use of AI in higher education (Aini et al., 2024; Abimanto & Mahendro, 2023; Nisa et al., 2024). Thus, whereas students plan to use AI, the broader context fails to support seamless and routine incorporation into practice. Open-ended responses indicated that students' willingness to continue depended on contextual factors such as affordability and the availability of advanced features like accent adaptation and realistic voice interaction.

### Implications

AI utilization in English-speaking practice implicates several aspects; first, Theoretical implications. From a theoretical standpoint, the findings reinforce TAM's explanatory power while also highlighting its limitations. Although PU and PEOU successfully predicted favorable attitudes, the slightly lower ITU scores suggest that TAM alone may not fully account for adoption behavior in Islamic university contexts. Recent extensions of TAM; such as incorporating TPACK, trust, and ethical considerations, have been proposed to capture these nuances (Barakat et al., 2025; Firdaus et al., 2025; Grassini, 2023). This study's findings support such extensions by showing that even when PU and PEOU are high, intention to use may still be influenced by cultural, financial, and infrastructural factors.

Second, considerations for pedagogy. From an implementation perspective, AI technologies in instructional pedagogy might be effective complements to classroom speaking practice and its individualized support especially in reducing anxiety. But successful implementation in practice needs to take external constraints into consideration. There has to be institution-supported infrastructure and training, subsidized access, and in particular, positive use perception (Aini et al., 2024, Kohnke et al., 2023, Montenegro-Rueda et al, 2023). Also, the growing understanding of teachers about the instructional potentials and constraints of AI tools could stimulate the more constructive use of such tools in the classroom (Dehghani & Mashhadi, 2024, Roe et al, 2023).

Third, Policy and ethical considerations. At the policy level, the findings call for the development of guidelines appropriate for the AI usage in the higher education Islamic context which are ethical, responsible, and culturally sensitive. Some scholars have argued that, in the absence of such policies, the issues of bias, privacy, and educational alignment may jeopardize the trust and adoption of the technology in the long run (Barakat et al., 2025; Shaikh et al., 2023; Grassini, 2023). In the case of Islamic universities, further issues that arise pertain to the consequences of employing AI for the institutional religious values and the possible conflict these tools may pose to students belief systems, an issue which is to some extent documented in the literature on AIED in the Muslim world (Aini et al., 2024; Karolina et al., 2025).

Fourth, This research adds to the existing body of literature on EFL students' acceptance of AI technologies by employing the TAM model in the context of an Islamic university, which has yet to be explored. It also asserts the need to go beyond the traditional TAM elements to include external, cultural, and institutional factors when students regard AI tools as useful and easy to use but demonstrate comparatively low behavioral intention (Chen et al., 2024; Ansas et al., 2024; Firdaus et al., 2025). TAM's ability to predict user acceptance of AI technologies in EFL could be enhanced by integrating trust, social influence, and religious alignment or adopting mixed-methods to more deeply understand learner workflows. Such context-driven studies, as noted in the above citations with Aini (2024), Barakat (2025), and Zou (2023), also strengthen the evolving theoretical, practical, and policy frameworks related to AI in language learning.

### CONCLUSION

In this study which involved Islamic university students, the participants described AI tools for English speaking practice as having attributes useful for confidence building, easy to use, and beneficial, which culminated to having positive attitudes towards its adoption. The intention to use the tools was, although still positive, much lower and diverse, which meant that there were some barriers to its seamless use. These results confirm the explanatory power of the TAM model in the context, while at the same time, TAM has its limitations because culture, infrastructure, and economy still go beyond the classical constructs of perceived usefulness and ease of use. The Muslim-majority culture and the religious context of the higher institutions in the region make the attempt in this study novel for the TAM model since technology acceptance is influenced by the culture and religion.

This study is bound to have certain limitations. First, the reliance on self-reported survey data has the potential for response bias. Second, the research was conducted at a single Islamic university, which restricts the generalizability of the findings. Third, the cross-sectional design limits the ability to draw causal inferences about the dimensions of the Technology Acceptance Model (TAM). Therefore, future studies should consider examining issues of religion, ethics, and trust more deeply and extend the analysis across multiple institutions using longitudinal or experimental designs. From a practical and policy perspective, universities and colleges bear the responsibility to address barriers such as subscription costs and infrastructural constraints. They should also provide training and resources to both faculty and students to ensure that the ethical use of AI aligns with institutional values and cultural contexts.

## REFERENCES

- Abimanto, D., & Mahendro, I. (2023). Efektivitas penggunaan teknologi AI dalam pembelajaran bahasa Inggris. *Sinar Dunia: Jurnal Riset Sosial Humaniora Dan Ilmu Pendidikan*, 2(2), 256–266. <https://doi.org/10.58192/sidu.v2i2.844>
- Aini, N., Kurniarahman, I., Widiati, U., Cahyono, B. Y., & Basthomi, Y. (2024a). Indonesian university students' perspectives on integrating AIED into English language learning. *Issues in Educational Research*, 34(3), 803–824. <https://iier.org.au/iier34/aini.pdf>
- Ansas, V. N., Pradana, H., Fauzi, F. R., Anugerah, B., Nurcahyo, W. H., & Dewatri, R. A. F. (2024). Towards AI-Integrated English Learning Activities: A TAM Analysis of Vocational Students' Behavioral Intention. *Southeast Asian Journal on Open and Distance Learning*, 2(02), 33–44. <https://odelia-journal.seamolec.org/>
- Ary, D., Jacobs, L., Irvine, C., & Walker, D. (2019). Introduction to research in education 10th edth ed. *Boston (MA): Cengage Learning*.
- Azzahra, N., Widiastuti, P. T., Sopyani, N., & Luthfiyyah, R. (2024). A Study on English Students' Perception Regarding the AI Implementation on Listening and Speaking Skills. *Indonesian Journal of Innovation and Applied Sciences (IJIAS)*, 4(2), 113–120. <https://doi.org/10.47540/ijias.v4i2.1466>
- Barakat, M., Salim, N. A., & Sallam, M. (2025). University educators perspectives on ChatGPT: A technology acceptance model-based study. *Open Praxis*, 17(1), 129–144. <https://doi.org/10.55982/>
- Belda-Medina, J., & Kokošková, V. (2024). ChatGPT for language learning: assessing teacher candidates' skills and perceptions using the Technology Acceptance Model (TAM). *Innovation in Language Learning and Teaching*, 1–16. <https://doi.org/10.1080/17501229.2024.2435900>
- Chen, M. A. (2021). students' English speaking performance, critical thinking awareness and awareness and speaking anxiety. *December 2019*. <https://doi.org/10.1111/bjet.12887>
- Chiu, M.-L. (2025). Exploring user awareness and perceived usefulness of generative AI in higher education: The moderating role of trust. *Education and Information Technologies*, 1–35. <https://doi.org/10.1007/s10639-025-13612-7>
- Dehghani, H., & Mashhadi, A. (2024). Exploring Iranian English as a foreign language teachers' acceptance of ChatGPT in English language teaching: Extending the technology acceptance model. *Education and Information Technologies*, 29(15), 19813–19834. <https://doi.org/10.1007/s10639-024-12660-9>
- Duong, N. T., Pham Thi, T. D., & Pham, V. K. (2025). A Comparative Study on AI-Based Learning Behaviors: Evidence from Vietnam. *International Journal of Human-Computer Interaction*, 41(16), 10007–10023. <https://doi.org/10.1080/10447318.2024.2430433>
- Firdaus, Q. A. H., Ghozali, A., & Alghifary, A. S. (2025). Islamic Philosophy and Artificial Intelligence: Mapping the Terrain. *Aqlania: Jurnal Filsafat Dan Teologi Islam*, 16(1), 1–22. <https://doi.org/10.32678/aqlania.v16i1.1>
- Grassini, S. (2023). Development and validation of the AI attitude scale (AIAS-4): a brief measure

- of general attitude toward artificial intelligence. *Frontiers in Psychology*, 14, 1191628. <https://doi.org/10.3389/fpsyg.2023.1191628>
- Huang, M. (2025). Student engagement and speaking performance in AI-assisted learning environments: A mixed-methods study from Chinese middle schools. *Education and Information Technologies*, 30(6), 7143–7165. <https://doi.org/10.1007/s10639-024-12989-1>
- Karolina, V., Querioz, C., Xaixanith, T., & Farhan, F. I. (2025). Indonesian EFL Learners Responses to Using ChatGPT: An Analysis Based on The TAM Model. *Journal of Education Research and Evaluation*, 9(2). <https://doi.org/10.23887/jere.v9i2.91799>
- Kim, H.-S., Cha, Y., & Kim, N. Y. (2021). Effects of AI chatbots on EFL students' communication skills. *영어학*, 21, 712–734. <https://doi.org/10.15738/kjell.21..202108.712>
- Kohnke, L., Moorhouse, B. L., & Zou, D. (2023). ChatGPT for language teaching and learning. *Relc Journal*, 54(2), 537–550. [https://doi.org/10.30191/ETS.202404\\_27\(2\).TP02](https://doi.org/10.30191/ETS.202404_27(2).TP02)
- Montenegro-Rueda, M., Fernández-Cerero, J., Fernández-Batanero, J. M., & López-Meneses, E. (2023). Impact of the implementation of ChatGPT in education: A systematic review. *Computers*, 12(8), 153. <https://doi.org/10.3390/computers12080153>
- Nisa, F. Z., Rahmadani, A., Febrianti, G. D., & Ajrina, N. N. (2024). Analisis penerimaan aplikasi ai elsa speak dan pengaruhnya terhadap minat penggunaan dengan model TAM. *Prosiding Seminar Nasional Teknologi Dan Sistem Informasi*, 4(1), 86–98. <https://doi.org/10.33005/sitasi.v4i1.763>
- Nisa, W., & Sulaiman, M. (2025). User Experience Analysis: ChatGPT-based AI in Islamic Religious Education Learning. *Studies in Learning and Teaching*, 6(1), 186–196. <https://doi.org/10.46627/silet.v6i1.612>
- Roe, J., Renandya, W. A., & Jacobs, G. M. (2023). A review of AI-powered writing tools and their implications for academic integrity in the language classroom. *Journal of English and Applied Linguistics*, 2(1), 3. <https://doi.org/10.59588/2961-3094.1035>
- Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers & Education*, 128, 13–35. <https://doi.org/10.1016/j.compedu.2018.09.009>
- Shaikh, S., Yayilgan, S. Y., Klimova, B., & Pikhart, M. (2023). Assessing the usability of ChatGPT for formal English language learning. *European Journal of Investigation in Health, Psychology and Education*, 13(9), 1937–1960. <https://doi.org/10.3390/ejihpe13090140>
- Shazly, R. El. (2021). *Effects of artificial intelligence on English speaking anxiety and speaking performance : A case study*. October 2020, 1–15. <https://doi.org/10.1111/exsy.12667>
- Sumakul, D. T. Y. G., Hamied, F. A., & Sukyadi, D. (2022). Artificial intelligence in EFL classrooms: Friend or foe? *LEARN Journal: Language Education and Acquisition Research Network*, 15(1), 232–256. <https://so04.tci-thaijo.org/index.php/LEARN/article/view/256723>
- Zou, B., Reinders, H., Thomas, M., & Barr, D. (2023). Using artificial intelligence technology for language learning. In *Frontiers in Psychology* (Vol. 14, p. 1287667). Frontiers Media SA. <https://doi.org/10.3389/fpsyg.2023.1287667>