

Socio-Affective Strategies in AI-Assisted Speaking: Use, Benefits, and Reflections among Malaysian ESL University Students

Nurul Amilin Razawi (Corresponding author)

Academy of Language Studies, Universiti Teknologi MARA Cawangan Terengganu

Kampus Dungun, 23000 Dungun, Terengganu, Malaysia

E-mail: nurulamilin@uitm.edu.my

Nuruladilah Mohamed

Academy of Language Studies, Universiti Teknologi MARA Cawangan Terengganu

Kampus Dungun, 23000 Dungun, Terengganu, Malaysia

E-mail: nuruladilah@uitm.edu.my

Norazean Sulaiman

Academy of Language Studies, Universiti Teknologi MARA Cawangan Terengganu

Kampus Dungun, 23000 Dungun, Terengganu, Malaysia

E-mail: norazean7981@uitm.edu.my

Emma Marini Abd Rahim

Academy of Language Studies, Universiti Teknologi MARA Cawangan Terengganu

Kampus Dungun, 23000 Dungun, Terengganu, Malaysia

E-mail: emmamarini@uitm.edu.my

Mia Emily Abd Rahim

Academy of Language Studies, Universiti Teknologi MARA Cawangan Terengganu

Kampus Dungun, 23000 Dungun, Terengganu, Malaysia

E-mail: miaemily@uitm.edu.my

Received: May 9, 2026 Accepted: July 21, 2026 Published: August 9, 2026doi:10.5296/ijssr.v14i2.23848 URL: <https://doi.org/10.5296/ijssr.v14i2.23848>

Abstract

The growing access to artificial intelligence (AI) speaking tools provides Malaysian tertiary ESL students with opportunities to practise spoken English beyond traditional classroom settings. Despite the growing interest in AI-assisted language learning, limited research has examined how students use socio-affective strategies during AI-assisted speaking practice. This study investigated students' use of socio-affective strategies, the perceived benefits associated with these strategies, and their reflections on the role of AI speaking tools in supporting speaking development. A mixed methods design was employed involving 165 Malaysian tertiary ESL students with prior experience in using AI speaking tools. Quantitative and qualitative data were collected through an adapted questionnaire based on Oxford's (1990) Strategy Inventory for Language Learning (SILL). Descriptive statistics, Pearson correlation, multiple regression, and thematic analyses were conducted. The findings revealed that students used both social and affective strategies during AI-assisted speaking practice with affective strategies being used slightly more frequently. Students perceived socio-affective strategies as beneficial for enhancing enjoyment, confidence, fluency, and error management. Affective strategies emerged as the only significant predictor while both strategy dimensions were positively associated with perceived benefits. This finding suggests that the affective dimension may play an important role in shaping students' perceived benefits within AI-assisted speaking environments. Qualitative findings further indicated that AI features such as feedback, role-play, progress tracking, and avatars supported the use of socio-affective strategies although challenges related to pronunciation, technical issues, and limited human interaction were also reported. The study extends socio-affective strategy research into AI-assisted speaking contexts and offers pedagogical insights for integrating AI-supported speaking activities in Malaysian higher education. More broadly, the findings suggest that AI-assisted speaking environments may represent a distinguished context in which established language learning strategies are implemented through both technological affordances and learner self-regulation.

Keywords: socio-affective strategies, AI-assisted speaking, Malaysian tertiary ESL students, artificial intelligence, speaking development

1. Introduction

The rapid development of artificial intelligence (AI) technologies has transformed educational practices across disciplines including language learning. In recent years, AI-supported applications such as conversational agents, virtual tutors, and generative AI platforms have become increasingly accessible to students by providing new opportunities for a more personalised and independent learning. In language education, these technologies have attracted considerable attention due to their potential to support communication practice, provide immediate feedback, and facilitate learner engagement beyond traditional classroom environments (Warschauer & Xu, 2024; Lee, 2025). Among the four language skills, speaking remains one of the most challenging skills for English as a Second Language (ESL) students to develop (Salih et al., 2024). Effective oral communication requires students to manage pronunciation, vocabulary, grammar, fluency, and interaction in real time simultaneously. Many students experience difficulties related to limited speaking opportunities, lack of confidence, communication apprehension, and fear of making mistakes which may hinder their oral performance (Alamri, 2024). These challenges are relevant particularly in higher education settings where students are frequently required to participate in presentations, discussions, interviews, and other communicative activities that demand effective spoken English proficiency.

In Malaysia, English proficiency continues to be regarded as an important graduate attribute particularly in relation to academic success, employability, and workplace communication (Ahmad Kamil et al., 2025). As a result, higher education institutions have increasingly explored technology-supported approaches to support students' language development. AI-assisted speaking tools including conversational agents, virtual speaking partners, and generative AI applications offer students opportunities to engage in speaking practice beyond classroom contact hours. Through features such as immediate feedback, simulated conversations, role-play activities, and personalised learning experiences, these tools have the potential to support speaking development and promote learner autonomy.

Previous studies have reported positive outcomes associated with AI-assisted speaking practice including students' increased confidence, motivation, fluency, and learner autonomy (Hoang, 2025; Ding & Yusof, 2025), although less attention has been devoted to understanding the learning processes that contribute to these outcomes. In particular, socio-affective strategies may play an important role in shaping students' experiences in AI-assisted speaking environments. Even though socio-affective strategies have been widely examined in traditional language learning settings, considerably less is known about how these strategies function when students interact with AI-supported speaking partners rather than human interlocutors. Understanding how students employ socio-affective strategies, the benefits they derive from these strategies, and their perceptions of AI-assisted speaking tools may provide valuable insights into the effective incorporation of AI technologies into language learning. Furthermore, investigating socio-affective strategies in AI-assisted speaking environments may contribute to a broader understanding of whether established language learning strategies function similarly or differently within the emerging AI-supported learning contexts. Therefore, this study investigates the use of socio-affective

strategies among Malaysian tertiary students engaged in AI-assisted speaking practice in English. Specifically, the study examines the socio-affective strategies employed by students, the perceived benefits associated with these strategies, and students' reflections on the role of AI-assisted speaking tools in supporting the strategy use. To contextualise the study, the following section reviews literature related to socio-affective strategies, perceived benefits of strategy use, and the role of AI-assisted speaking tools in supporting language learning.

2. Literature Review

2.1 Use of Socio-Affective Strategies in AI-Assisted Speaking

Socio-affective strategies have long been identified as important contributors to language learning and speaking development. According to Oxford (1990), socio-affective strategies consist of two complementary dimensions which are social strategies and affective strategies. Social strategies facilitate interaction, cooperation, and communication with others. On the other hand, affective strategies enable students to regulate emotions, motivation, confidence, and anxiety during language learning. Together, these strategies help students manage both the interpersonal and emotional demands associated with speaking. Previous studies have demonstrated consistently that students who employ socio-affective strategies actively tend to experience lower levels of speaking anxiety, greater confidence, stronger willingness to communicate, and improved oral performance (Razawi & Mohamad, 2024; Dag-Akbas, 2024). Social strategies support speaking development by encouraging interaction, clarification, giving feedback, and collaborative learning, while affective strategies assist students in maintaining motivation and regulating emotional responses during speaking activities.

The rise of AI-assisted speaking tools has created new contexts in which socio-affective strategies may function. Unlike the traditional classroom-based speaking activities, AI-assisted speaking often occurs independently by requiring students to regulate emotions, sustain motivation, and monitor progress when engaging with AI-supported interactions (Hoang, 2025; Ding & Yusof, 2025). At the same time, AI tools provide opportunities for conversational practice, role-play activities, and feedback that may support both social and affective dimensions of learning. Therefore, socio-affective strategies remain highly relevant within AI-assisted speaking environments although their implementation may differ from the traditional face-to-face contexts. More importantly, the development of AI-assisted speaking environments raises theoretical questions about whether socio-affective strategies continue to function in similar ways when interaction occurs with AI-generated interlocutors rather than human communication partners.

2.2 Perceived Benefits of Socio-Affective Strategies in Speaking Development

A significant body of research has linked socio-affective strategies to positive language learning outcomes. Students who manage emotions effectively and engage in supportive interactions are more likely to participate actively in speaking activities and persist when faced with communicative challenges. Previous studies have associated the use of socio-affective strategies with increased confidence, reduced anxiety, greater enjoyment,

enhanced motivation, improved fluency, and stronger willingness to communicate (Ye & Hu, 2025; Dag-Akbas, 2024). In technology-supported learning environments, socio-affective strategies appear to play an important role equally. Digital platforms often require students to engage in independent learning which makes affective regulation particularly important for sustaining motivation and maintaining engagement (Tang et al., 2025). Similarly, opportunities for interaction, feedback, and collaborative learning continue to support social dimensions of language development (Shaddad & Jember, 2024). These findings suggest that socio-affective strategies may contribute significantly to the students' perceived benefits when engaging in AI-assisted speaking practice.

However, existing research has examined the effectiveness of AI tools or students' perceptions of technology use primarily with moderately limited attention devoted to understanding the specific contribution of socio-affective strategies to perceived speaking benefits among students (Hoang, 2025; Mudawy, 2025). Moreover, it remains unclear whether socio-affective strategy dimensions contribute equally to students' experiences in AI-assisted speaking environments. Therefore, further investigation is needed to understand how these strategies influence students' experiences in AI-assisted speaking contexts.

2.3 AI-Assisted Speaking Tools as Support for Socio-Affective Learning

Recent developments in AI-assisted language learning have introduced a range of features designed to support speaking practice. Applications such as ChatGPT Voice, ELSA Speak, Duolingo, Replika, and similar conversational AI platforms provide students with opportunities for repeated interaction, immediate feedback, pronunciation support, role-play simulations, progress tracking, and personalised learning experiences. These features may facilitate speaking development in supporting students' socio-affective needs simultaneously.

2.3.1 Feedback, Role-Play, and Progress Monitoring

Research has indicated that feedback mechanisms help students identify mistakes, monitor progress, and refine speaking performance (Shaddad & Jember, 2024). Role-play activities create opportunities to rehearse real-life communication scenarios in a more relaxed environment (Tran et al., 2025). Progress-tracking features may further enhance motivation, self-monitoring, and goal setting. Together, these advantages may support both social and affective dimensions of language learning by encouraging interaction, confidence building, and sustained engagement in speaking practice.

2.3.2 Challenges and Limitations of AI-Assisted Speaking Tools

Despite their potential benefits, AI-assisted speaking tools are not without limitations. Researchers have reported concerns regarding technological limitations, feedback quality, and the authenticity of AI-supported interactions in speaking practice (Mudawy, 2025; Hoang, 2025). Such challenges may affect students' speaking experiences and reduce the effectiveness of AI-assisted practice particularly when students encounter difficulties in interpreting feedback or communicating complex ideas.

2.3.3 The Continuing Importance of Human Interaction

Even though AI-assisted speaking tools provide beneficial opportunities for speaking practice, scholars have argued that they cannot replicate authentic human communication completely. Human interaction involves spontaneity, emotional responsiveness, negotiation of meaning, and sociocultural nuances that remain difficult for AI systems to reproduce (Lee, 2025; Li et al., 2024). As a result, AI-assisted speaking tools are often viewed as complementary resources rather than replacements for interaction with teachers, peers, or other real-world communication partners. Therefore, the effectiveness of AI-assisted speaking practice may depend on how students integrate AI-supported activities with authentic communicative experiences. Taken these accounts together, the findings suggest that AI-assisted speaking tools may support the implementation of socio-affective strategies when presenting challenges that influence students' speaking experiences simultaneously. At the same time, the increasing use of AI-supported interaction raises important questions about how socio-affective strategies are implemented when students communicate with artificial rather than human interlocutors. However, further research is needed to understand how students employ these strategies, perceive their benefits, and reflect on the role of AI-assisted speaking tools in supporting speaking development.

2.4 Research Gap and Rationale

Regardless of the growing interest in AI-assisted language learning, several gaps remain in the literature. First, limited research has examined how students employ socio-affective strategies when engaging with AI-assisted speaking tools. Although socio-affective strategies have been studied widely in traditional language learning contexts, yet limited attention has been dedicated to understanding how these strategies function when students engage with AI-assisted speaking partners. As a result, it remains unclear whether AI-assisted speaking environments merely support the existing socio-affective strategies or reshape the ways these strategies are implemented during speaking practice. Second, although previous studies have reported positive outcomes associated with AI-assisted speaking practice including increased confidence, motivation, and speaking fluency, comparatively little attention has been devoted to understanding the perceived benefits associated with the use of socio-affective strategies in these contexts. Therefore, the specific contribution of social and affective strategies to students' speaking experiences remains inadequately understood. Third, research remains limited regarding students' reflections on how AI features facilitate or challenge the use of socio-affective strategies during speaking practice. Existing studies have focused predominantly on technology acceptance, learner perceptions of AI tools, or speaking outcomes with less emphasis on understanding how students interact with AI-assisted speaking tools and how these interactions influence their strategy use. From a theoretical perspective, the rising presence of AI-assisted interaction challenges the existing assumptions of socio-affective strategy research that has traditionally been grounded in human-to-human communication. Therefore, investigating socio-affective strategies within AI-assisted speaking contexts may contribute to a broader understanding of language learning strategy use in the emerging digital and AI-supported environments. These gaps are particularly recognisable in Malaysian tertiary ESL contexts where AI-assisted speaking tools are used

increasingly to supplement classroom learning and provide additional opportunities for speaking practice. With the growing adoption of AI technologies in higher education, a better understanding of students' use of socio-affective strategies, perceived benefits, and reflections on AI-assisted speaking tools is needed to inform both theory and practice.

Therefore, the present study addresses these gaps by investigating Malaysian tertiary students' use of socio-affective strategies in AI-assisted speaking practice, the perceived benefits associated with these strategies, and students' reflections on the role of AI-assisted speaking tools in supporting strategy use. Thus, the study seeks to provide insights into students' experiences with AI-assisted speaking practice and also to contribute to a broader understanding of how socio-affective strategies function within AI-supported language learning environments. Guided by these objectives, the study sought to answer the following research questions:

RQ1: Which socio-affective strategies do Malaysian ESL students employ when using AI-assisted speaking tools?

RQ2: To what extent do socio-affective strategies contribute to the perceived benefits of AI-assisted speaking practice?

RQ3: How do students reflect on the affordances and challenges of AI-assisted speaking tools in supporting socio-affective strategy use?

3. Methodology

3.1 Research Design

This study employed a mixed-methods research design to investigate Malaysian ESL tertiary students' use of socio-affective strategies in AI-assisted speaking practice. A mixed-methods approach was considered appropriate as it enabled the collection and integration of both quantitative and qualitative data by providing a more comprehensive understanding of students' experiences. Quantitative data were used to examine patterns of the use of socio-affective strategies and students' perceived benefits, and qualitative data provided deeper insights into students' reflections on strategy use, challenges encountered, and the role of AI-assisted speaking tools in supporting speaking development. The combination of both quantitative and qualitative evidence was particularly valuable for exploring how socio-affective strategies were employed within AI-assisted speaking environments and how students articulated their experiences with AI-assisted interactions. The integration of both forms of data facilitated triangulation and strengthened the interpretation of findings (Fetters & Molina-Azorin, 2023).

3.2 Participants

The participants comprised 165 Malaysian ESL students enrolled in diploma and degree programmes at Universiti Teknologi MARA (UiTM). Participants ranged in age from 18 to 23 years and had prior experience in using AI-assisted speaking tools for English language learning. Participation was voluntary, and responses were collected anonymously through an online questionnaire administered via Google Forms. Among the 165 participants, 105

(63.6%) were diploma students, and 60 (36.4%) were degree students. ChatGPT Voice Mode was the most frequently used AI-assisted speaking tool reported by 86.1% of participants, followed by Duolingo (33.3%). Other tools including ELSA Speak, Replika, HelloTalk, and SmallTalk2Me were used less frequently. These findings suggest that conversational generative AI has become a widely utilised resource for speaking practice among Malaysian tertiary students.

3.3 Instrumentation

Data were collected using an adapted questionnaire which consists of four sections. The instrument was adapted from Oxford's (1990) Strategy Inventory for Language Learning (SILL) specifically the social and affective strategy subscales. The original items were contextualised to reflect AI-assisted English-speaking practice while maintaining the principal socio-affective strategy constructs. This adaptation allowed the investigation of socio-affective strategies within an AI-assisted learning context while retaining the conceptual fundamentals of Oxford's (1990) framework. To establish content validity, the adapted questionnaire was reviewed by TESL lecturers from Universiti Teknologi MARA Terengganu. The reviewers evaluated the relevance, clarity, and appropriateness of the items for AI-assisted speaking contexts. Feedback from the reviewers was incorporated into the final version of the instrument.

Section A collected demographic information including age, study level, and AI-assisted speaking tools used by participants. Section B measured the use of socio-affective strategies through 12 items rated on a five-point Likert scale ranging from 1 (Never) to 5 (Always). Consistent with Oxford's (1990) framework, the section consisted of six social strategy items and six affective strategy items. The social strategy items focused on students' interactions with peers and lecturers, the seeking of feedback behaviours, collaborative speaking practices, and engagement with English-speaking communities. The affective strategy items examined self-encouragement, self-reward, positive self-talk, goal setting, anxiety management, and emotional awareness during AI-assisted speaking activities. Section C measured students' perceived benefits of socio-affective strategies in AI-assisted speaking practice through four items which address confidence, fluency, enjoyment, and error management. Responses were recorded on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Section D consisted of four open-ended questions that invited participants to reflect on how socio-affective strategies supported their speaking development, the AI features that facilitated strategy use, the challenges encountered during AI-assisted speaking practice, and their overall experiences using AI tools to improve speaking. All participants responded to the open-ended questions which enabled a comprehensive investigation of students' experiences and facilitated triangulation with the quantitative findings.

Prior to the actual data collection, a pilot study involving 30 Malaysian ESL students was conducted to evaluate the clarity, relevance, and reliability of the adapted questionnaire. The participants possessed characteristics similar to those of the target population but were excluded from the main study. Feedback obtained from the pilot participants and expert reviewers was used to refine the wording of several items to improve clarity and contextual

appropriateness for AI-assisted English-speaking practice. Reliability analysis was conducted on the pilot data and indicated excellent internal consistency across all constructs. The social strategies scale yielded a Cronbach's alpha coefficient of .908, and the affective strategies scale produced an alpha coefficient of .872. Also, the perceived benefits scale demonstrated a Cronbach's alpha coefficient of .913. These values exceeded the recommended threshold of .70 indicating that the instrument was suitable for administration in the main study (Taber, 2018). Following this, a reliability analysis was conducted using data obtained from the actual study ($N = 165$). The results indicated satisfactory internal consistency across all constructs. The social strategies scale demonstrated good reliability ($\alpha = .841$), and the affective strategies scale exhibited high reliability ($\alpha = .887$). The perceived benefits scale demonstrated excellent reliability ($\alpha = .919$). All reliability coefficients exceeded the recommended minimum value of .70 (Taber, 2018) which confirmed the suitability of the instrument for investigating the use of socio-affective strategies and perceived benefits in AI-assisted English-speaking practice.

3.4 Data Collection Procedures & Analysis

Data were collected online using Google Forms. The questionnaire link was distributed to students who had prior experience in using AI-assisted speaking tools. Participants were informed of the purpose of the study and assured that their responses would remain anonymous and confidential. Participation was entirely voluntary, and informed consent was obtained prior to questionnaire completion. Subsequently, quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS) Version 29. Descriptive statistics including means and standard deviations were used to identify patterns of the use of socio-affective strategies and perceived benefits. Pearson correlation analysis was conducted to examine the relationships between social strategies, affective strategies, and perceived benefits. Multiple regression analysis was performed to determine the extent to which social and affective strategies predicted the perceived benefits of AI-assisted speaking practice among the students. Qualitative responses were analysed using thematic analysis. The responses were read repeatedly to achieve familiarity with the data before being coded and organised into themes. The analysis focused on three areas which were the students' use of socio-affective strategies, perceived benefits associated with these strategies, and reflections on the affordances and challenges of AI-assisted speaking tools. Specific attention was given to students' descriptions of how AI-assisted interactions supported or inhibited their use of socio-affective strategies during speaking practice. The qualitative findings were integrated with the quantitative results to provide a richer and more nuanced understanding of students' experiences in AI-assisted speaking environments. Lastly, ethical principles were observed throughout the study. Participation was voluntary, informed consent was obtained prior to data collection, and respondents' identities were not collected. All responses were treated confidentially and reported in aggregate form to protect participants' anonymity. The data were used solely for research purposes.

4. Findings

4.1 Students' Use of Socio-Affective Strategies

Quantitative analysis revealed that students employed both social and affective strategies during AI-assisted speaking practice. As shown in Table 1, both strategy dimensions were used at moderate-to-high levels. Affective strategies ($M = 3.55$, $SD = 0.79$) were employed slightly more frequently than social strategies ($M = 3.42$, $SD = 0.72$) which indicated that students relied more on self-regulation practices than interpersonal support when engaging with AI-assisted speaking tools.

Table 1. Overall use of socio-affective strategies in AI-assisted speaking practice ($N = 165$)

Strategy Dimension#	Mean#	SD#
Social Strategies#	3.42#	0.72#
Affective Strategies#	3.55#	0.79#

As shown in Table 2, among the social strategies, learning about English-speaking culture to support speaking development was the most frequently employed strategy ($M = 3.64$, $SD = 0.91$), followed by practising speaking with friends ($M = 3.58$, $SD = 0.97$). Asking friends or lecturers for explanations ($M = 3.43$, $SD = 1.03$) and discussing ways to improve speaking through AI tools with friends ($M = 3.41$, $SD = 0.90$) were moderately practised. In contrast, asking friends or lecturers for help or advice ($M = 3.27$, $SD = 0.94$) and speaking English when discussing AI-assisted speaking practice with others ($M = 3.18$, $SD = 1.00$) were the least frequently employed strategies. These findings indicate that students tended to engage more in practical and exploratory social activities than in explicit feedback seeking behaviours.

Table 2. Students' use of social strategies ($N = 165$)

Item	Mean	SD
I try to learn about English-speaking culture to help my speaking through AI tools	3.64	0.91
I practice speaking with friends to help my learning through AI tools	3.58	0.97
I ask friends or lecturers to explain something I do not understand when using AI tools	3.43	1.03
I talk with friends about how to get better at speaking using AI tools	3.41	0.90
I ask friends or lecturers for help or advice about using AI tools to speak English	3.27	0.94
I speak English when I talk with others about my AI speaking practice	3.18	1.00

Table 3 shows that affective strategies were also widely employed. The most frequently reported affective strategy was self-encouragement to speak despite fear of making mistakes ($M = 3.73$, $SD = 0.95$), followed by reminding oneself of learning goals ($M = 3.71$, $SD = 0.86$) and using positive self-talk to enhance confidence ($M = 3.64$, $SD = 0.95$). Relaxation when

feeling nervous ($M = 3.48$, $SD = 1.02$) and self-reward after practice ($M = 3.48$, $SD = 1.07$) were moderately employed, whereas monitoring feelings of nervousness or tension during AI-assisted speaking practice was the least frequently used affective strategy ($M = 3.28$, $SD = 1.04$). The findings suggest that students primarily relied on motivational and confidence-building strategies when interacting with AI-assisted speaking tools.

Table 3. Students' use of affective strategies ($N = 165$)

Item	Mean	SD
I encourage myself to speak English even if I am afraid of making mistakes using AI tools	3.73	0.95
I remind myself of my learning goals when practicing speaking with AI tools	3.71	0.86
I use positive self-talk to feel more confident using AI tools	3.64	0.95
I try to relax when I feel nervous about speaking English using AI tools	3.48	1.02
I reward myself (e.g., take a break or treat myself) after completing speaking practice using AI tools	3.48	1.07
I notice when I feel nervous or tense when practicing speaking with AI tools	3.28	1.04

To provide a better understanding of these quantitative patterns, qualitative responses were analysed to explore how students implemented social and affective strategies during AI-assisted speaking practice. The qualitative findings further reinforced the quantitative results. As for social strategies, students frequently highlighted interaction, conversational practice, and role-play activities as valuable opportunities for developing speaking skills. Majority of them described engaging in conversations with AI tools, treating AI as a conversational partner that enabled them to practise real-life communication in a conducive environment. Students also reported practising English with friends and family members which indicate that both AI-supported and human interactions contributed to their speaking development.

Similarly, the qualitative findings supported the importance of affective strategies. Students frequently described using self-encouragement, positive thinking, and goal reminders to maintain motivation and manage speaking anxiety. Majority of them emphasised that AI tools provided a safe and unprejudiced environment where they could practise speaking without fear of making mistakes. Students also reported feeling more confident, less nervous, and more willing to communicate after repeated practice with AI tools. Moreover, the flexibility of practising anytime and anywhere was perceived as beneficial for sustaining motivation and consistency. As a result, the findings indicate that AI-assisted speaking environments support both interactional practice and affective self-regulation, with students relying slightly more on confidence-building and motivational strategies than on interpersonal support. This pattern is consistent with the higher overall mean reported for affective strategies as compared to social strategies. Given the importance of affective strategies in students' reported practices, further analyses were conducted to examine their perceived benefits associated with the use of socio-affective strategies.

4.2 Students' Perceived Role and Benefits of Socio-Affective Strategies

The findings revealed that the students perceived socio-affective strategies as highly beneficial in supporting AI-assisted speaking practice. Overall, the perceived benefits of socio-affective strategies were rated positively ($M = 3.86$, $SD = 0.68$) indicating that students generally viewed these strategies as important contributors to their speaking development when using AI-assisted tools.

As shown in Table 4, the most highly rated benefit was increased enjoyment during AI-assisted speaking practice ($M = 3.94$, $SD = 0.78$), followed by improved ability to manage speaking problems and mistakes ($M = 3.85$, $SD = 0.76$). Students also perceived socio-affective strategies as beneficial for improving speaking fluency ($M = 3.83$, $SD = 0.74$) and confidence ($M = 3.82$, $SD = 0.76$). The consistently high mean scores across all items suggest that students regarded socio-affective strategies as valuable mechanisms for enhancing both the social and affective dimensions of AI-assisted speaking practice.

Table 4. Perceived benefits of socio-affective strategies in AI-assisted speaking practice ($N = 165$)

Item	Mean	SD
Using these strategies makes my AI speaking practice more fun and interesting	3.94	0.78
These strategies help me deal with problems or mistakes when I speak using AI tools	3.85	0.76
These strategies help me speak more fluently using AI tools	3.83	0.74
Using these strategies helps me speak English more confidently using AI tools	3.82	0.76

To further examine the perceived role of socio-affective strategies, Pearson correlation analyses were conducted between the two strategy dimensions and perceived benefits. As shown in Table 5, the results revealed significant positive relationships between social strategies and perceived benefits ($r = .599$, $p < .001$), as well as between affective strategies and perceived benefits ($r = .743$, $p < .001$). These findings indicate that students who reported greater use of socio-affective strategies also tended to perceive greater benefits from AI-assisted speaking practice. Significantly, the stronger correlation for affective strategies suggests that independent speaking practices may play a more influential role in shaping students' perceptions of speaking improvement and learning benefits.

Table 5. Correlations between socio-affective strategies and perceived benefits

Variable	1	2	3
1. Social Strategies	-		
2. Affective Strategies	.740**	-	
3. Perceived Benefits	.599**	.743**	-

Note. $p < .001$.

A multiple regression analysis was conducted later to determine the relative contribution of social and affective strategies in predicting perceived benefits. As shown in Table 6, the model was statistically significant, $F(2, 162) = 101.80$, $p < .001$, explaining 55.7% of the variance in perceived benefits ($R^2 = .557$). When both predictors were entered simultaneously, affective strategies emerged as a significant predictor of perceived benefits ($B = 0.575$, $\beta = .663$, $t = 8.521$, $p < .001$), yet social strategies were not a significant predictor ($B = 0.103$, $\beta = .108$, $t = 1.386$, $p = .168$). These findings indicate that although both strategy dimensions were positively associated with perceived benefits, affective strategies served a stronger influence on students' perceptions of the effectiveness of AI-assisted speaking practice.

Table 6. Multiple regression predicting perceived benefits of AI-assisted speaking practice

Predictor	B	β	t	p
Social Strategies	0.103	.108	1.386	.168
Affective Strategies	0.575	.663	8.521	< .001

Model Summary: $R^2 = .557$, $F(2,162) = 101.80$, $p < .001$.

The findings revealed that although both social and affective strategies were positively associated with perceived benefits, affective strategies accounted for a significantly greater proportion of the explained variance. Affective strategies emerged as the stronger contributor to students' perceived benefits of AI-assisted speaking practice between the two strategy dimensions examined. This suggests that emotional regulation, self-motivation, and confidence-building may be particularly important in AI-assisted speaking environments.

The qualitative findings further reinforced these quantitative results. Students frequently associated socio-affective strategies with greater enjoyment, engagement, and motivation during AI-assisted speaking activities. Interactive features such as role-plays, debates, and casual conversations were perceived as making speaking practice more enjoyable and encouraging sustained participation. Students also highlighted the role of socio-affective strategies in supporting error management and fluency development through repeated practice, immediate feedback, and opportunities to rehearse conversations. Several students reported that AI-generated examples and corrective feedback helped them identify mistakes, refine their language use, and improve speaking accuracy. Other than that, confidence-building emerged as

another significant benefit. Students frequently described AI-assisted speaking environments as safe, flexible, and conducive spaces where they could practise without fear of judgement. Majority of them reported feeling more comfortable in speaking English after repeated interactions with AI tools particularly because they were able to practise independently, receive immediate feedback, and repeat activities at their own pace. Furthermore, the flexibility of AI-assisted speaking practice allowed students to engage in regular speaking activities anytime and anywhere which contribute to sustained motivation, confidence, and speaking development.

Overall, the findings reveal that students perceived socio-affective strategies as playing a significant role in enhancing enjoyment, confidence, fluency, and error management during AI-assisted speaking practice. More importantly, the correlation and regression analyses suggest that affective strategies were significantly influential in shaping these perceived benefits by highlighting the importance of self-regulation, motivation, and confidence-building in AI-assisted speaking environments.

4.3 Students' Reflections on AI-Assisted Speaking Tools in Supporting the Use of Socio-Affective Strategies

The qualitative analysis presented three interrelated themes regarding students' reflections on AI-assisted speaking tools which are (1) AI features supporting the use of socio-affective strategies, (2) challenges and limitations of AI-assisted speaking tools, and (3) the continuing importance of human interaction. These themes provide insights into how students perceived the affordances and constraints of AI-assisted speaking practice.

4.3.1 AI Features Supporting the Use of Socio-Affective Strategies

Students identified several AI features that supported the use of socio-affective strategies during speaking practice particularly feedback, role-play and simulation, scoring and progress tracking, and avatars or AI characters. Among these features, immediate feedback emerged as one of the most valuable forms of support. Students reported that feedback helped them identify mistakes, improve pronunciation, and refine their speaking performance. One participant stated that *"Feedback and role-play help me practice and improve,"* while another student explained that *"Feedback helps me understand my mistakes and improve my pronunciation."* These responses suggest that feedback serves as an important mechanism for self-monitoring and speaking improvement during AI-assisted practice. Other than that, role-play and simulation features were also frequently mentioned. Students appreciated opportunities to engage in simulated conversations that resembled authentic communication situations. For example, a student remarked that *"Role-play allows me practise real-life conversations..."* while another student stated that *"Role-play features help me practice social interaction by simulating real-life situations..."* Such features appeared to support speaking rehearsal and interaction in conducive environments by allowing students to practise communication skills before engaging in real-life conversations. In addition, scoring and progress-tracking features were perceived as useful tools for maintaining motivation and monitoring development. Students reported that *"Scoring or progress tracking helps with affective strategies..."* and that *"Feedback, role-play, and scoring help me practice and see*

progress....” These findings indicate that visible indicators of improvement may enhance students’ motivation and confidence during AI-assisted speaking practice. On top of that, students also emphasised the role of avatars and AI characters in promoting engagement. A student remarked that *“The parts of AI tools that help me use these strategies the most are feedback, role-play, and avatars.”* The presence of interactive AI characters appeared to create more engaging speaking experiences, and encouraging students to participate more actively in speaking activities.

4.3.2 Challenges and Limitations of AI-Assisted Speaking Tools

Regardless of the benefits of using AI-assisted speaking tools, students reported several challenges that affected their learning experiences. One of the most frequently mentioned issues was pronunciation and accent recognition. Students indicated that AI systems sometimes failed to interpret their pronunciation, accent, or intended meaning accurately which result in misunderstandings and inaccurate feedback. As a student explained, *“AI sometimes does not fully understand my pronunciation or accent, which can cause incorrect feedback”*. Other than that, technical issues also emerged as a recurring challenge. Problems such as unstable internet connections, loading delays, and access limitations occasionally interrupted speaking practice. A student simply noted *“Trouble with internet,”* while another student explained, *“When the internet connection, I deal by finding a new place that can easy to practice.”* These findings suggest that the effectiveness of AI-assisted speaking practice remains dependent on reliable technological infrastructure. In addition, students further reported difficulties related to vocabulary comprehension and language complexity. Some students emphasised that AI-generated feedback or vocabulary was occasionally too advanced which make it difficult to understand explanations or apply corrections effectively. The rest of the students reported challenges in expressing their ideas clearly to AI tools particularly when discussing unfamiliar topics or complex concepts.

4.3.3 The Continuing Importance of Human Interaction

Even though students generally viewed AI-assisted speaking tools positively, many students emphasised that AI could not fully replace authentic human interaction. Several participants described AI conversations as robotic, repetitive, or less natural than communication with real speakers. A student stated that *“It feels robotic; lacks human interaction,”* while another student noted that *“AI can’t fully replace speaking with real people.”* Moreover, some students also expressed their concerns regarding over-reliance on AI tools. A student explained, *“My problem that I face is I may rely too much on AI and feel less confident speaking to real people. How I deal with it is I apply what I learn from AI in real life conversations.”* Such responses indicate that students recognise the need to transfer skills developed through AI-assisted practice into authentic communication contexts. Overall, the findings highlight that AI-assisted speaking tools support the use of socio-affective strategies through feedback, simulated interaction, motivational features, and engaging learning experiences. However, students also acknowledged several limitations related to technological constraints, communication authenticity, and human interaction. These reflections suggest that AI-assisted speaking tools are most effective when used as complementary resources alongside opportunities for

authentic communication and interpersonal interaction.

In sum, the findings revealed that students actively employed socio-affective strategies during AI-assisted speaking practice, perceived these strategies as beneficial, and viewed AI tools as a valuable yet imperfect speaking partner. The following discussion interprets these findings in relation to the existing literature and theoretical perspectives.

5. Discussion

5.1 Students' Use of Socio-Affective Strategies When Using AI-assisted Speaking Tools

The findings revealed that Malaysian tertiary students employed both social and affective strategies during AI-assisted speaking practice, with affective strategies being used slightly more frequently than social strategies. This suggests that AI-assisted speaking environments provide opportunities for interaction and communication practice and also for self-regulation, confidence building, and emotional management. Among the affective strategies, self-encouragement, goal reminders, and positive self-talk emerged as the most frequently employed practices which indicate that students relied heavily on internal motivational resources when engaging with AI-assisted speaking tools. The qualitative findings further demonstrated that AI-assisted speaking environments support the use of socio-affective strategies through conversational practice, role-play activities, and opportunities for repeated interaction. Students frequently described AI as a conversational partner that allowed them to rehearse speaking in conducive settings. These findings are consistent with Oxford's (1990) socio-affective strategy framework which emphasises the importance of interaction and affective regulation in language learning. However, the present study extends this perspective by highlighting that AI-assisted speaking tools create additional opportunities for students to regulate their emotions and sustain motivation during speaking practice independently. The findings further highlight that socio-affective strategies may not simply transfer from traditional speaking contexts into AI-assisted environments. Instead, AI-assisted interaction alters the conditions under which these strategies are implemented by increasing learner autonomy while at the same time reducing dependence on immediate human emotional support. The findings also support Krashen's Affective Filter Hypothesis which proposes that language acquisition is facilitated when anxiety is reduced and students feel psychologically safe. These findings are also consistent with previous studies by demonstrating that socio-affective strategies contribute to students' confidence, willingness to communicate, and oral performance (Razawi & Mohamad, 2024; Dag-Akbas, 2024). Similarly, Hoang (2025) and Ding and Yusof (2025) argued that AI-assisted speaking environments require students to engage in autonomous and sustained motivation while interacting independently with AI-assisted speaking tools. Students repeatedly reported that AI-assisted speaking tools provided safe environments where mistakes could be made without fear of making mistakes or negative judgement. This conducive environment appears to encourage greater willingness to communicate and sustained engagement in speaking activities. Therefore, AI-assisted speaking tools may function as psychologically safe rehearsal spaces that facilitate the implementation of socio-affective strategies during ESL speaking practice. From this perspective, AI-assisted speaking environments may signify a different context for the use of

socio-affective strategies in which students continue to use established strategies, but do so under interactional conditions that differ from traditional human-assisted communication.

5.2 Affective Strategies as the Significant Predictor of Perceived Benefits

Students perceived socio-affective strategies as highly beneficial in supporting AI-assisted speaking practice. This finding aligns with previous research linking the use of socio-affective strategies to increased confidence, reduced anxiety, greater enjoyment, enhanced motivation, improved fluency, and stronger willingness to communicate (Ye & Hu, 2025; Dag-Akbas, 2024). The most highly rated benefits included enjoyment, confidence, fluency, and error management which suggest that socio-affective strategies contribute to both emotional engagement and speaking development. More importantly, the correlation and regression analyses revealed that affective strategies were more strongly associated with perceived benefits than social strategies. Although both strategy dimensions were positively related to perceived benefits, affective strategies emerged as the only significant predictor when both variables were examined simultaneously. This finding indicates that independent practices such as self-encouragement, positive self-talk, goal setting, and anxiety management play a particularly important role in shaping students' perceptions of successful AI-assisted speaking experiences. In contrast, even though social strategies are beneficial, they did not independently predict perceived benefits after controlling for affective strategy use. One possible explanation is that AI-assisted speaking practice is frequently conducted independently and outside formal classroom settings. AI-assisted environments often require students to sustain motivation and regulate emotions autonomously, unlike traditional speaking activities that rely heavily on peer interaction and lecturer support. Therefore, affective strategies become particularly important for maintaining engagement and overcoming speaking anxiety. The importance of affective strategies in the present study further supports Tang et al.'s (2025) argument that affective regulation becomes increasingly important in autonomous digital learning environments where students must independently sustain motivation and engagement. Although opportunities for interaction remain valuable, the findings suggest that emotional regulation and motivational control may apply a stronger influence on the students' perceived benefits in AI-assisted speaking contexts. Therefore, the findings highlight the central role of affective self-regulation in AI-assisted language learning and suggest that successful speaking development depends on opportunities for interaction and also on students' ability to manage emotions and motivation effectively. The finding in which affective strategies emerged as the significant predictor may also indicate a potential shift in the importance of socio-affective strategy dimensions within AI-assisted speaking environments. As generally acknowledged, social strategies have been traditionally viewed as important contributors to speaking development. However, AI-assisted speaking practice may place greater emphasis on affective dimension because students frequently engage with speaking activities autonomously and outside immediate social settings.

5.3 AI Functions as a Valuable but Imperfect Speaking Partner

The findings further revealed that students perceived several AI features as valuable in supporting the use of socio-affective strategies. Immediate feedback, role-play simulations,

progress tracking, and avatars were identified as key mechanisms that facilitated speaking practice, confidence development, and learner engagement. Through these features, AI-assisted speaking tools provided opportunities for students to monitor performance, practise communication skills, and receive corrective feedback in ways that encouraged sustained participation. These findings support earlier research suggesting that feedback mechanisms, role-play activities, and progress-monitoring features facilitate speaking development by allowing students to rehearse communication, monitor performance, and build confidence in conducive environments (Shaddad & Jember, 2024; Tran et al., 2025). Regardless of these benefits, students also reported several limitations. Pronunciation and accent recognition issues sometimes resulted in misunderstandings and inaccurate feedback. Technical problems including internet connectivity and system limitations disrupted speaking practice for some students. Students also reported difficulties related to complex vocabulary, advanced feedback, and challenges in expressing ideas clearly to AI tools. The reported challenges are also consistent with previous research which highlight concerns regarding technological limitations, feedback quality, and the authenticity of AI-assisted speaking interactions (Mudawy, 2025; Hoang, 2025). Most importantly, students consistently emphasised the continuing pertinence of authentic human interaction. Many students described AI conversations as less natural than real-world communication and expressed concerns regarding over-reliance on AI-assisted speaking practice. These findings highlight that although AI can simulate interaction and provide valuable speaking opportunities, yet it cannot fully replicate the spontaneity, emotional responsiveness, and communicative complexity of human conversations. This observation further supports the argument that AI-assisted speaking tools should be viewed as complementary rather than replacement resources because authentic communication involves spontaneity, emotional responsiveness, negotiation of meaning, and sociocultural nuances that remain difficult for AI tools to reproduce (Lee, 2025; Li et al., 2024). The findings contribute to the growing body of AI-assisted language learning research by suggesting that AI tools should not be viewed as a replacement for human communication but as a supplementary interlocutor that complements authentic speaking experiences. This distinction is theoretically important because it suggests that AI-assisted speaking environments engage with an intermediate position between independent language learning and social interaction, hence creating unique conditions for the implementation of socio-affective strategies. Therefore, the most effective speaking development may occur when AI-assisted practice is integrated with opportunities for interaction with teachers, peers, and other real-world communication partners.

5.4 Implications for ESL Teaching and Learning in Malaysian Higher Education

The findings in this study have several implications for ESL teaching and learning in Malaysian higher education. First, AI-assisted speaking tools may serve as valuable supplementary resources for tertiary students who have limited opportunities to practise English outside the classroom. This implication aligns with the previous research which highlight the potential of AI-assisted speaking tools to provide flexible speaking opportunities and support independent language learning beyond classroom settings (Hoang, 2025; Tran et al., 2025). Features such as immediate feedback, role-play simulations, progress tracking, and

interactive avatars provide students with accessible opportunities to engage in speaking practice beyond scheduled learning hours. ESL lecturers may therefore consider incorporating structured AI-assisted speaking activities into university language courses to extend opportunities for oral communication practice and support independent learning. Secondly, the findings highlight the importance of affective strategies in shaping students' perceived benefits of AI-assisted speaking practice. As affective strategies emerged as the strongest predictor of perceived benefits, lecturers should encourage students explicitly to develop self-regulatory practices such as goal setting, self-encouragement, positive self-talk, and anxiety management. Also, particular attention should be focused on helping students develop affective self-regulation skills because these strategies are especially relevant in AI-assisted learning environments where students are expected to manage their speaking practice independently. This recommendation is consistent with Tang et al. (2025) who emphasised the importance of affective regulation in sustaining learner engagement within technology-assisted learning environments. Such strategies may be particularly beneficial for ESL tertiary students who are expected to assume greater responsibility for their learning and who often experience communication apprehension when speaking English. Third, AI-assisted speaking tools may be integrated into speaking-oriented university courses as preparatory platforms prior to authentic communication tasks. For example, students may use AI-assisted role-play activities, mock interviews, presentation rehearsals, and discussion simulations before participating in classroom presentations, group discussions, or oral assessments. This integration may help students build confidence, refine speaking performance, and reduce anxiety before engaging in face-to-face communication. Lastly, university ESL programmes should adopt a balanced and structured approach that combines AI-assisted speaking activities with collaborative learning tasks, peer interaction, presentations, and real-world communication opportunities. This approach may maximise the benefits of using technology while preserving opportunities for meaningful interpersonal communication.

5.5 Limitations and Future Research Directions

Several limitations should be acknowledged. First, the study relied primarily on self-reported data which may be influenced by participants' perceptions, memory, and response tendencies. Although qualitative findings provided additional insights, the reported use of strategies and perceived benefits may not fully reflect the actual speaking behaviours. Second, the study was conducted among tertiary students in Malaysia which may limit the generalisability of the findings to other educational, linguistic, and cultural contexts. Future studies may examine the use of socio-affective strategies among students from different countries, institutions, proficiency levels, and academic disciplines to determine whether similar patterns emerge across diverse learning environments. Third, the study focused on students' perceptions of AI-assisted speaking practice rather than objective measures of speaking performance. Future research may incorporate speaking assessments, experimental designs, or longitudinal approaches to investigate whether socio-affective strategies contribute to measurable improvements in speaking proficiency over time. These approaches may address concerns raised in previous AI-assisted language learning studies regarding the reliance on self-reported perceptions as indicators of learning outcomes (Mudawiy, 2025; Hoang, 2025). On top of that,

the rapid evolution of generative AI technologies suggests that students' experiences with AI-assisted speaking tools may continue to change. Furthermore, the study employed correlational and regression analyses to examine relationships among variables, therefore, causal relationships cannot be inferred from the findings. Future research should explore the emerging AI features and examine how technological developments influence the use of socio-affective strategies and speaking development. Future studies may also explore whether the roles of socio-affective strategies differ across various AI-assisted speaking environments and student populations. Such research may contribute to a better understanding of how socio-affective strategies function within the developing AI-assisted language learning contexts.

6. Conclusion

This study investigated the use of socio-affective strategies among Malaysian ESL tertiary students involved in AI-assisted English-speaking practice. The findings revealed that students employed both social and affective strategies during AI-assisted speaking activities with affective strategies playing a predominantly important role in shaping perceived benefits. Students also viewed AI-assisted speaking tools as valuable resources that supported speaking development through feedback, role-play, progress tracking, and opportunities for repeated practice. However, the findings further suggest that AI tools function most effectively as a supplementary resource rather than a replacement for authentic human interaction. Overall, this study contributes to the growing body of research on AI-assisted language learning by demonstrating how socio-affective strategies function within AI-supported speaking environments. Beyond documenting the students' use of the strategies, the findings suggest that AI-assisted speaking environments may influence the roles of social and affective strategies, with the affective dimension emerges as predominantly influential in shaping students' perceived learning benefits. The findings highlight the importance of affective self-regulation, confidence-building, and motivation in shaping students' experiences and perceived benefits of AI-assisted speaking practice. The study further extends the existing socio-affective strategy research beyond the traditional human-assisted language learning contexts by demonstrating how these strategies function within AI-assisted speaking environments. As AI technologies continue to evolve, understanding how students strategically engage with these tools will become increasingly important for promoting effective and sustainable language learning. The present findings suggest that the greatest benefits of AI-assisted speaking may emerge when technological affordances are complemented by students' use of socio-affective strategies and opportunities for authentic communication. In sum, the findings indicate that AI-assisted speaking environments represent a distinctive context for language learning in which technological support, students' self-regulation, and authentic communication interact to shape speaking development. These insights provide a foundation for the meaningful integration of AI technologies into ESL tertiary-level speaking instruction while reinforcing the continuing importance of genuine human communication in language learning.

References

- Ahmad Kamil, M., Syed Husain, S. S., & Abdul Kadir, Z. (2025). *Professional communication for employability: A qualitative study of graduate and employer insights. Business and Professional Communication Quarterly*. Advance online publication. <https://doi.org/10.1177/23294906251358387>
- Alamri, W. A. (2024). Foreign language speaking anxiety in relation to gender: An investigation of the causes of students' speaking anxiety. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2423440>
- Dag-Akbas, R. (2024). Enhancing EFL students' speaking confidence: The role of explicit communication strategy training. *i-manager's Journal on English Language Teaching*, 14(3), 54–66. <https://doi.org/10.26634/jelt.14.3.20941>
- Ding, D., & Yusof, A. M. (2025). Investigating the role of AI-powered conversation bots in L2 speaking development. *Humanities and Social Sciences Communications*, 12, Article 05550. <https://doi.org/10.1057/s41599-025-05550-z>
- Fetters, M. D., & Molina-Azorin, J. F. (2023). *The Sage handbook of mixed methods research design*. SAGE.
- Hoang, N. H. (2025). AI for English speaking practice: A study of effectiveness and engagement among Vietnamese university students. *Australasian Journal of Educational Technology*, 41(3), 45–59. <https://doi.org/10.14742/ajet.10050>
- Lee, J. (2025). Speaking English with AI or Humans: What Engages EFL Students More? *English Teaching*, 80(5), 41–66. <https://doi.org/10.15858/engtea.80.5.202512.41>
- Lee, S., Choe, H., Zou, D., & Jeon, J. (2025). Generative AI (GenAI) in the language classroom: A systematic review. *Interactive Learning Environments*, 1–25. <https://doi.org/10.1080/10494820.2025.2498537>
- Li, S., Shao, T., Yu, Z., & Hirschberg, J. (2024). *Using adaptive empathetic responses for teaching English*. arXiv. <https://doi.org/10.48550/arXiv.2404.13764>
- Mudawiy, A. M. A. (2025). Exploring EFL students' perceptions on the use of AI-powered conversational tools to improve speaking fluency: A case study at Majmaah University. *Forum for Linguistic Studies*, 7(1), 589–598. <https://doi.org/10.30564/fls.v7i1.7774>
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Newbury House Publishers.
- Razawi, N. A., & Mohamad, F. (2024). Investigating ESL students' use of socio-affective strategies to enhance speaking motivation and speech fluency at a public university in Malaysia. *Asian People Journal*, 7(2), 1–17. <https://doi.org/10.37231/apj.2024.7.2.586>
- Salih, A. A., Alzubaidi, H. K., & Al-Obaydi, L. H. (2024). Enhancing EFL students' engagement in situational speaking activities through technology-supported instruction. *Frontiers in Education*, 9, 1439104. <https://doi.org/10.3389/feduc.2024.1439104>

Shaddad, A. R. E., & Jember, B. (2024). A step toward effective language learning: An insight into the impacts of feedback-supported tasks and peer-work activities on students' engagement, self-esteem, and language growth. *Asian-Pacific Journal of Second and Foreign Language Education*, 9, Article 61. <https://doi.org/10.1186/s40862-024-00261-5>

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>

Tang, S., Zhang, Y., & Zhang, L. J. (2025). Motivation and self-regulated learning among online English language students: Examining their interrelationships in digital learning environments. *Education Sciences*, 15(12), 1619. <https://doi.org/10.3390/educsci15121619>

Tran, M. T. N., Thach, L. S., & Nguyen, P. N. T. (2025). Effects of the two formats of authentic role-play on EFL young students' speaking performance. *European Journal of English Language Studies*, 5(1), 49–63. <https://doi.org/10.12973/ejels.5.1.49>

Warschauer, M., & Xu, Y. (2024). Generative AI for language learning: Entering a new era. *Language Learning & Technology*, 28(2), 1–4. <https://doi.org/10.64152/10125/73569>

Ye, X., & Hu, G. (2025). Effects of motivational interventions on EFL students' willingness to communicate, self-confidence, and anxiety: An experimental study. *Language Teaching Research*, Advance online publication. <https://doi.org/10.1177/13621688251367858>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).