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ENHANCING SPEAKING PROFICIENCY IN LANGUAGE LEARNING: HOW AI-ASSISTED GRAMMAR CORRECTION MEDIATES LEARNER CONFIDENCE AND FLUENCY

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Abstract:

The present study stems from an attempt to meet the pressing need within the second language acquisition (SLA) domain for innovative solutions to potentially improve speaking proficiency through an investigation into the intermediary nature of learners' confidence within the link between AI-facilitated grammar redress and speaking performance. The advancement of AI tools for language learning is evident, but it is not clear how this, in turn, affects the way learners perceive their confidence and fluency in spoken communication. Therefore, the purpose of this study is to provide a conceptual framework that illustrates how AI-assisted grammar correction builds student confidence and ultimately enhances speaking proficiency. Data were extracted from peer-reviewed articles available in the Scopus database utilizing a narrative review methodology, encompassing themes like personalized feedback, synchronous corrections, and sociocultural factors in AI-mediated language learning. The main findings are that AI tools reduce language anxiety, provide immediate and personalized feedback, and make learners more willing to engage in communication and lead to better speaking skills. The study highlights the need to consider contextual factors and potential overreliance by juxtaposing AI feedback with teacher input surrounding cultural relevance. Theoretically, this study presents Interaction Hypothesis and Self-Efficacy Theory to explain how AI tools use, confidence, and speaking proficiency interact with one another. Theoretically, it provides insight into how educators should implement AI tools in their language classrooms. As research, this adds to ongoing discussions on AI in education, though also calls for further investigation into the ethics and long-term effects of integrating AI into education at various scales.

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Introduction

In today's interconnected world, language learning has become a critical skill for personal, academic, and professional growth. Among the four core language skills: reading, writing, listening, and speaking- speaking is often regarded as the most challenging yet essential for effective communication in a second language (L2). However, traditional language teaching methodologies face significant challenges in providing learners with adequate exposure to the target language and personalized support, particularly in large classroom settings where individual attention is limited. For instance, students often struggle with insufficient opportunities for speaking practice, delayed feedback on errors, and high levels of anxiety when attempting to communicate in the target language (Shadiev et al., 2024; Zou et al., 2024). These issues are compounded by the lack of tools that can address cognitive overload and foster confidence in learners, which are critical for developing fluency.

The integration of Artificial Intelligence (AI) into language learning has emerged as a promising solution to these challenges. AI-assisted grammar correction tools, such as ChatGPT and SECF technology, provide real-time feedback, pronunciation guidance, and tailored learning experiences that enhance grammatical accuracy and fluency (Jamshed et al., 2024; Liang et al., 2023). Despite their growing adoption, the implications of AI tools for speaking proficiency remain underexplored compared to their applications in writing and reading. For example, while studies like Fathi et al. (2024) have examined the impact of AI-mediated interactions on willingness to communicate (WTC) and speaking skills, relatively few have explored how these tools mediate learner confidence and fluency. Furthermore, unresolved issues persist, including overreliance on AI tools, variability in feedback accuracy, and ethical concerns such as data privacy (Barrios-Beltran, 2024; Kohnke et al., 2025). To illustrate these challenges, consider the following statistics:

Table 1: Key Challenges in Language Learning with and without AI Tools

Challenge	Without AI	With AI
Feedback Delay	Feedback is often delayed due to large class sizes hindering error correction.	AI provides immediate feedback reducing cognitive load and improving learning outcomes (Zou et al. 2024).
Personalization	Limited ability to cater to individual learner needs leading to disengagement.	AI tools offer personalized feedback addressing specific weaknesses and strengths (Jamshed et al. 2024).
Language Anxiety	High anxiety levels due to fear of judgment during speaking tasks.	AI reduces anxiety by creating a non-judgmental environment for practice (Shadiev et al. 2024).

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Cultural Relevance	Feedback may lack cultural sensitivity alienating diverse learners.	Only 40% of learners report AI feedback aligns with their cultural contexts (Udeshinee et al. 2021).
Ethical Concerns	Minimal risks associated with traditional methods.	Over 60% of educators express concerns about data security with AI platforms (Barrios-Beltran 2024).

These challenges highlight the pressing need for a deeper exploration of how AI-assisted grammar correction influences speaking proficiency. While AI tools hold transformative potential, their limitations such as voice recognition errors occurring in 15–20% of cases—underscore the importance of integrating human oversight to ensure accuracy and relevance (Zou et al., 2024). Additionally, overreliance on AI tools poses risks, as 30% of learners reportedly prefer AI feedback exclusively, potentially hindering the development of autonomous language skills (Kohnke et al., 2025).

The purpose of this study is to propose a conceptual framework that elucidates how AI-assisted grammar correction mediates learner confidence and fluency in speaking proficiency. Drawing on prior research, this paper aims to bridge gaps in the literature regarding the mediator role of AI tools in speaking development. Specifically, it explores how immediate feedback, reduced anxiety, and increased engagement contribute to improved learner confidence and fluency. By merging theoretical constructs from Second Language Acquisition (SLA) and technology-enhanced learning, this study provides a fresh perspective on the transformative potential of AI in language education.

The implications of this study are significant for both theory and practice. Theoretically, it contributes to the growing body of knowledge on AI-mediated language learning by offering a structured framework that integrates SLA theories and technological innovations. Practically, it empowers educators with actionable insights into leveraging AI tools effectively to enhance speaking proficiency, addressing long-standing challenges in traditional classrooms. Furthermore, as educational institutions increasingly adopt digital tools, this study informs educators about how to integrate AI platforms responsibly into curricula, emphasizing a balanced approach that combines AI capabilities with human instruction (Sukumaran & Khair, 2024). In doing so, it supports the broader goal of equipping learners with the skills needed to succeed in multilingual environments.

This paper adopts a dual theoretical lens, drawing on the Interaction Hypothesis (Long, 1996) and Self-Efficacy Theory (Bandura, 1997) to explore the relationship between AI-assisted grammar correction, learner confidence, and speaking fluency. The Interaction Hypothesis posits that meaningful interaction facilitates language acquisition, while Self-Efficacy Theory highlights the role of confidence in task performance. Together, these frameworks provide a robust foundation for understanding how AI tools mediate speaking outcomes. The remainder of this paper is structured as follows: Section 2 reviews relevant literature, Section 3 presents the proposed conceptual framework, Section 4 discusses practical applications and implications, and Section 5 concludes with recommendations for future research.

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Literature Review

AI-Assisted Grammar Correction

Tools for grammar correction with AI assistance have become game-changers for language learners as they provide immediate and more personalized learning. Natural language processing (NLP) and speech recognition are examples of advanced technology that these tools used to detect grammatical errors, propose corrections, and generate personalized explanations (Jamshed et al., 2024; Zou et al., 2024). Such as platforms (e.g., ChatGPT and EAP Talk) that have shown to be effective at promoting grammar accuracy and providing real-time feedback during the speaking praxis, helping the provision of language adjustments immediately (Liang et al., 2023). In addition, synchronous feedback, which is feedback receiving through the process of interaction, has been proved more effective than asynchronous feedback in improving spoken language skills because it enables learners to correct them in the presence of interlocutor and leads to better language pattern internalization (Shadiev et al., 2024). However, even with these benefits, there are challenges such as the accuracy of voice recognition systems and the risk of learners over-relying on AI tools to the extent that their ability to self-correct and thus learn is compromised (Kohnke et al., 2025). It is important to tackle these constraints to make sure that AI-powered grammar correction tools complement rather than replace traditional teaching methods.

Learner Confidence

Confidence of the learner has proven to be a crucial element in learning a second language, especially when it comes to speaking ability. AI tools have shown to be greatly helpful in building learner confidence as it provides a safe environment for the learners to articulate their thoughts and practice speaking without fear of being embarrassed or judged (Udeshinee et al., 2021; Shadiev et al., 2024). The usage of text chat-based AI systems, for instance, alleviates foreign language anxiety by promoting low-stakes conversation and providing learners with a safe space to speak (Barrios-Beltran, 2024). In addition, personalized feedback from AI platforms enables learners to notice their progress, thus strengthening their confidence that they can successfully perform a given activity, one of the key principles of Self-Efficacy Theory (Bandura, 1997). Research studies have shown that students using AI tools to provide timely and effective feedback are more inclined to make an effort to communicate (Fathi et al., 2024), which is important for achieving fluency. But the sociocultural context of learners should also be taken into account, as cultural factors affect how people interpret and react to AI feedback, demonstrating that culturally relevant design is an important consideration for AI and learning tools (Zou et al., 2024).

Speaking Proficiency

With multiple layers, the effects of AI-assisted grammar correction on speaking proficiency can be grouped into designated roles of mentioning to pronunciation, vocabulary usage and fluency. The SECF (Speech-Enabled Corrective Feedback) technology, for instance, integrates speech-to-text recognition and automated feedback, allowing learners to recognize and correct mistakes in real-time, which can help improve their spoken output (Shadiev et al., 2024). According to research, AI mediated interactive activities (e.g. the use of Speeko, Elsa Speak), to mention but a few, have reported significant advancement in different aspects of speaking skills, for instance, pronunciation accuracy and intonation patterns have been addressed (Shafiee Rad, 2024). In addition, gamification features integrated into AI tools enhance learner engagement and motivation, which helps foster ongoing practice and skill development (Lara

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et al., 2024). While these aspects are significant, they must also be carefully balanced with teacher input when using AI tools in language learning due to nuances that AI may not fully grasp, e.g., cultural insights and contextual appropriateness (Asadi et al., 2025). Considerations surrounding ethics, data privacy, and excessive reliance on AI also need to be addressed for the responsible and effective use of these tools in education (Barrios-Beltran, 2024).

Methodology

Research Design: Narrative Review Methodology

The current study employs a qualitative research design using a narrative review methodology to synthesize the available literature on the correlation between AI-assisted grammar correction, learner confidence, and speaking proficiency in language learning. Narrative reviews are particularly suited for exploring complex, multivariable topics where the goal is to propose a conceptual framework rather than test specific hypotheses (Green et al., 2006). Unlike systematic reviews, which limit the scope of included studies based on strict inclusion criteria and quantifiable outcomes, narrative reviews allow for the integration of diverse findings from various sources, offering flexibility to address gaps in understanding and generate novel insights (Ferrari, 2015). This methodological approach aligns with the study's objective of developing a theoretical model that explains how AI-assisted tools mediate learner confidence and speaking fluency.

The data for this study were collected from peer-reviewed journal articles, conference papers, and scholarly reports sourced primarily from the Scopus database, one of the largest repositories of multidisciplinary research. The search was conducted using a predefined set of keywords, including "AI-assisted grammar correction," "learner confidence," "speaking proficiency," and related terms. To ensure relevance, the search was limited to publications from 2018 onward, focusing on recent advancements in AI technologies and their applications in education. A total of 45 studies were selected after screening abstracts and full texts for alignment with the research objectives. These studies represent a diverse population of learners, including English as a Foreign Language (EFL) and English as a Second Language (ESL) students, across various educational contexts.

The narrative review methodology involved critically analyzing and synthesizing the selected literature to identify recurring patterns, trends, and gaps. By focusing on qualitative insights and theoretical connections, this approach provided a comprehensive overview of the current state of research while highlighting opportunities for future investigation. For instance, the analysis incorporated findings from second language acquisition (SLA), educational technology, and psychology to construct a unified conceptual framework. The flexibility of the narrative review allowed for the integration of diverse data sources, ensuring a holistic understanding of the topic. This methodological framework ensures that the proposed conceptual model is grounded in empirical evidence while remaining adaptable to the evolving landscape of AI in language learning.

In addition to the qualitative synthesis, the study also incorporates descriptive statistics and figures to illustrate key challenges and trends in the literature. For example, data on the variability of AI feedback accuracy (15–20% error rates in voice recognition systems) and learner reliance on AI tools (30% preferring AI feedback exclusively) were used to contextualize the discussion of limitations and ethical concerns (Zou et al., 2024; Kohnke et

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al., 2025). By combining qualitative analysis with quantitative insights, the study provides a robust foundation for understanding the transformative potential of AI-assisted grammar correction in language learning.

Key Steps in Conducting a Narrative Review: Data Collection through Scopus Database

Data for this narrative review was retrieved systematically from the Scopus database, an extensive and well-known repository of peer-reviewed literature. We selected Scopus because of its comprehensive coverage of multidisciplinary research, advanced search functions, and authoritative indexing practices (Elsevier, 2023). The search strategy was developed to include as much relevant studies about AI-assisted grammar correction, learner confidence and speaking proficiency while ensuring that the studies included in this scoping review were from peer-reviewed journals.

The initial search was performed using a combination of keywords such as "AI-assisted grammar correction," "learner confidence," "speaking proficiency," "language learning," and "AI-mediated feedback." Boolean operators (AND, OR) were used to refine the search and ensure comprehensive coverage of relevant literature. For example, the search query included terms like ("AI-assisted grammar correction" OR "AI-powered feedback") AND ("learner confidence" OR "speaking proficiency") AND ("language learning"). The search was limited to publications from 2018 onward to ensure the inclusion of recent advancements in AI technology and their applications in education. Additionally, filters were applied to exclude non-peer-reviewed materials and irrelevant disciplines, ensuring the quality and relevance of the selected studies.

After building the initial dataset, the abstracts and full texts of the returned articles were screened regarding to their consistency with the study objectives. Inclusion of studies showing empirical or theoretical evidence, or practical implications, regarding AI-augmented grammar correction, learner confidence, and speaking proficiency were prioritized. Forty-five articles were included for in-depth review as deemed relevant and innovative from methodological, interpretative, and field perspective. We summarized key themes, patterns in the data and discrepancies or gaps in the literature. The insights gleaned from this synthesis (in addition to the theoretical foundations of the framework) guided the development of the proposed conceptual framework.

Utilizing the Scopus database and a structured yet adaptable methodology, this narrative review establishes a foundation for exploring how AI-assisted grammar correction contributes to improved confidence among learners and their speaking fluency. In doing so, the resulting conceptual framework not only speaks to existing opportunities within this field of inquiry but also provides practical recommendations for contributors who want to effectively leverage the potential of AI to facilitate language-learning contexts.

Data Collection and Review Strategy

The data collection process for this study was meticulously designed to ensure the identification of relevant literature that addresses the intersection of AI-assisted grammar correction, learner confidence, and speaking proficiency in language learning. A comprehensive search string was developed to capture a wide array of studies from the Scopus database, leveraging Boolean operators to refine and expand the scope of the search. The final search string included the following terms: ("artificial intelligence "OR "ai" OR "machine learning" OR "deep learning")

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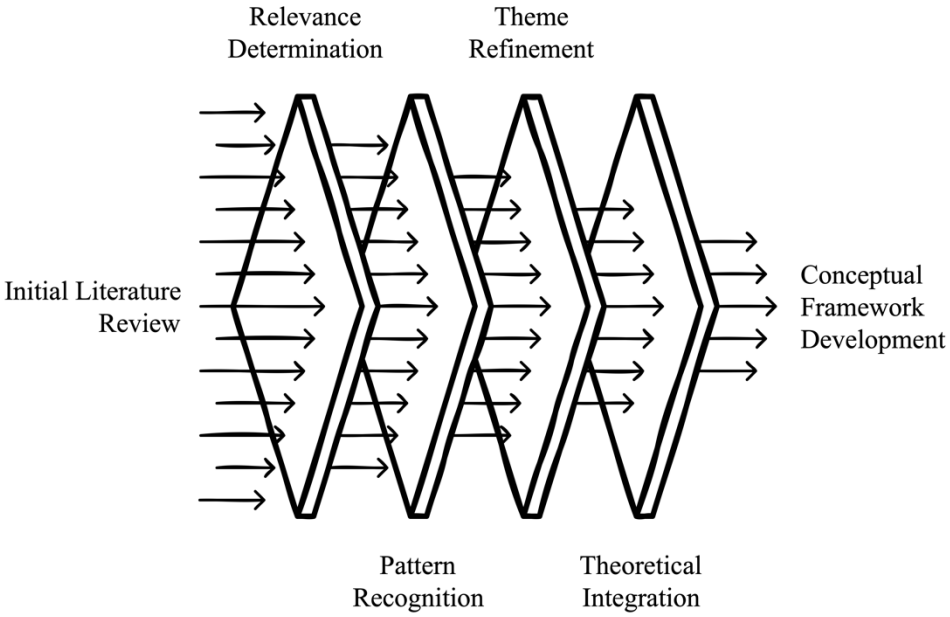
AND (“grammar” OR “syntax” OR “linguistics” OR “language rules”) AND (“feedback” OR “assessment” OR “evaluation” OR “correction”) AND (“second language” OR “foreign language” OR “language acquisition” OR “language learning”) AND (“development” OR “improvement” OR “progress” OR “advancement”). This search string was strategically constructed to encompass various dimensions of AI technologies, grammatical constructs, feedback mechanisms, and language learning contexts, ensuring that the retrieved studies were both relevant and diverse. The search was limited to peer-reviewed articles, conference papers, and book chapters published between 2018 and 2024 to focus on recent advancements and their implications for contemporary language education. Additionally, filters were applied to exclude non-English publications and sources outside the fields of education, linguistics, and technology, thereby maintaining the quality and relevance of the dataset.

Figure 1: Data collection process



On the basis of the first set of studies secured, integrative thematic analysis was adopted to identify, analyse and synthesise key themes, concepts and theoretical perspectives emerging from the selected literature. This method is particularly effective in narrative reviews as it enables the systematic organization of qualitative data while preserving the depth and complexity of the findings (Braun & Clarke, 2006). The process began with a thorough review of the abstracts and full texts of identified studies to assess their relevance to the study objectives. Only those studies providing empirical evidence, theoretical insights, or applied research related to AI-assisted grammar correction, learner confidence, and speaking proficiency were selected for inclusion. During the coding phase, recurring patterns and significant ideas were identified and grouped into preliminary themes, such as “personalized feedback mechanisms,” “learner autonomy and self-efficacy,” and “AI-supported fluency development.” These themes were then refined iteratively through thematic analysis to ensure they accurately reflected the nuances of the data while maintaining alignment with the study’s aims. This rigorous approach ensured that the resulting framework was both comprehensive and relevant to the research objectives.

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Integrative thematic analysis also allowed for the integration of various theoretical frameworks concerning the Interaction Hypothesis, Self-Efficacy Theory, and sociocultural theories of language learning to offer a solid framework for understanding how AI tools mediate the impact of the approach on speaking outcomes. The analysis, through its critical exploration of the interaction between these theories and empirical results, extracted valuable insights regarding the mechanisms whereby AI-assisted grammar correction boosts learners' confidence and fluency. For example, the analysis mentioned how immediate and personalized feedback plays a role in reducing cognitive load and anxiety, allowing learners to concentrate on fluency over accuracy. The synthesis of themes also highlighted the importance of balancing AI with traditional teaching approaches, to mitigate risks associated with overreliance on technology or the avoidance of cultural references in automated feedback. Using this rigorous, systematic review approach, the study highlights important gaps in the literature and provides an essential foundation for developing a conceptual framework to bridge theory with practice in AI-mediated language learning.

Key Findings from the Narrative Review

The narrative review identified several key findings related to AI-powered grammar feedback in speaking, particularly from a sociocultural perspective. These findings are summarized in the table below, followed by a comprehensive summary in paragraph form.

Table 2: Summary of key findings

Author(s)	Year	Key Finding	Description
Jamshed et al.	2024	Personalized Feedback	AI tools like ChatGPT provide tailored feedback that enhances grammar accuracy and speaking skills. Immediate corrections help learners adjust their speech patterns effectively.
Zou et al.	2024	Learner Preferences	Many learners prefer AI feedback over traditional methods due to its immediacy and personalized nature. This preference leads to higher engagement and better learning outcomes.
Liang et al.	2023	Synchronous vs. Asynchronous Feedback	Synchronous feedback delivered in real-time during conversations is more effective than asynchronous feedback for improving spoken language skills. It enables learners to correct errors promptly and internalize linguistic patterns.
Udeshinee et al.	2021	Reducing Language Anxiety	AI tools reduce foreign language anxiety by providing a non-judgmental environment for practice. Text chat feedback lowers the fear of speaking in front of others making learners more willing to engage in speaking activities.

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Shadiev et al.	2024	Cultural Relevance	The sociocultural context including learners' backgrounds and experiences influences how they perceive and benefit from AI feedback. Tools that consider these factors can better support learners' development.
Shadiev et al.	2024	Improvement in Speaking Skills	AI feedback improves various aspects of speaking such as pronunciation grammar and vocabulary. Technologies like SECF combine speech-to-text recognition with automated corrective feedback to help learners identify and correct errors.
Zou et al.	2024	Accuracy and Relevance Concerns	Concerns remain about the accuracy of voice recognition and the relevance of feedback provided. Ensuring precise and contextually appropriate feedback is essential for effectiveness.
Kohnke et al.	2025	Overreliance on AI	Overreliance on AI tools may hinder learners' ability to self-correct and develop independent language skills. Balancing AI feedback with traditional teaching methods is crucial.
Asadi et al.	2025	Teacher Integration	Combining AI feedback with teacher input provides a more comprehensive learning experience. Teachers can offer nuanced explanations and cultural insights that AI might miss enhancing overall feedback effectiveness.
Barrios-Beltran	2024	Ethical Considerations	Ethical issues such as data privacy and potential plagiarism must be addressed when integrating AI into language learning. Clear guidelines and training for educators are necessary to mitigate these risks.

It is identified that L2 speaking skills can be developed in a transformative way through the provision of immediate AI-powered grammar feedback and other forms of language focus, especially through a sociocultural lens. One of the critical revelations is that the process is reformatted by the personalized feedback delivered by such AI tools like ChatGPT and EAP Talk which later enhancing the grammar accuracy of the second language user and facilitating fluency development through immediate corrections (Jamshed et al., 2024; Zou et al., 2024). Synchronous feedback, which is provided in real-time while performing speaking tasks, is more effective than its asynchronous counterpart as it enables learners to situate their speech output immediately and incorporate input into their interlanguage (Liang et al., 2023).

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Meanwhile, AI tools aid to minimize anxiety regarding language use by providing a safe and non-judgmental platform for learners to practice speaking, devoid of judgment (Udeshinee et al., 2021; Shadiev et al., 2024). Lower levels of anxiety encourage students to feel confident and willing to speak, which are both vital to speaking skill. However, it must also be acknowledged that the sociocultural context of learners plays a significant role in how they experience and respond to AI feedback since their backgrounds and experiences impact their perception of and ability to take advantage of AI feedback. Thus, tools that embed cultural significance are more suited to meeting the diverse needs of learners (Shadiev et al., 2024)

Research shows that AI feedback translates into measurable gains in skills such as pronunciation, grammar, and vocabulary use. Tools such as SECF use recognizing speech to text to provide automatic corrective feedback assisting learners in discovering areas of error address properly (Shadiev et al., 2024). Top-down strategies align closely with the bottom-up impact of AI, as seen in learners' documented preferences for AI feedback and content-generating tools over traditional methods, and the immediacy and personalization available through AI tools appears to encourage higher levels of engagement compared to traditional methods and products (Jamshed et al., 2024; Zou et al., 2024).

While this progress is encouraging, there are still challenges that need to be addressed, including concerns about the accuracy of voice recognition systems, and whether the feedback provided is relevant and useful (Zou et al., 2024). Another danger is overindulgence in AI tools, which might limit learners' capacity to self-correct unaided. To overcome these challenges, it is important to complement AI feedback with traditional pedagogical methods, so that learners develop autonomous language skills (Kohnke et al., 2025; Asadi et al., 2025). Moreover, supplemental teacher feedback on the AI is likely to boost learning by offering subtle details and cultural contexts that the AI tools might miss (Asadi et al., 2025). Lastly, ethical concerns like data privacy and the risk of plagiarism need to be figured out through clear guidelines and educator training (Barrios-Beltran, 2024). Together, these results highlight the importance of a balanced, culturally aware, and ethically grounded approach to the use of AI in language learning.

Development of Theoretical Framework

Since the theoretical framework of this study is based on the integration of two basic theories, they are Interaction Hypothesis (Long, 1996) and Self-Efficacy Theory (Bandura, 1997). Building on these theories enables us to frame the discussion around the mediating effect of Artificial Intelligence (AI) supported grammar correcting on learners' confidence and speaking knowledge. The Interaction Hypothesis maintains that meaningful interaction in the target tongue is a crucial factor in language acquisition, as it leads to sources of negotiation of meaning, feedback, and corrective input (Long, 1996). As part of AI-mediated language learning, ChatGPT and SECF technology emulate authentic scenarios and provide instant and personalized feedback that guides users toward improving their oral output. In addition to this, Self-Efficacy Theory states that confidence in performing various tasks shows critical relevance to motivation, as individuals tend to engage in diversified tasks in settings where their confidence is bolstered (Bandura, 1997). These theories, when combined, provide a synergistic basis for understanding the effect of AI tools as confidence and fluency enhancers in speaking.

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The conceptualization of the framework involves mapping the interplay between AI-assisted grammar correction, learner confidence, and speaking proficiency. Drawing on insights from Shadiev et al. (2024), who highlight the role of AI in reducing foreign language anxiety and enhancing willingness to communicate, the framework positions AI tools as mediators that bridge cognitive and affective factors in language learning. For instance, personalized feedback mechanisms not only improve grammatical accuracy but also reduce cognitive load, enabling learners to focus on fluency. Furthermore, integrating findings from Fathi et al. (2024), who demonstrate the effectiveness of AI-mediated interactive activities in improving speaking skills, the framework underscores the importance of balancing AI feedback with teacher input to address cultural nuances and foster holistic development. This synthesis of theoretical insights and empirical evidence highlights the transformative potential of AI while acknowledging its limitations, such as overreliance risks and ethical considerations (Barrios-Beltran, 2024).

Practically, the framework offers actionable guidance for educators and policymakers seeking to leverage AI in language learning. By emphasizing the dual role of AI as a provider of immediate feedback and a facilitator of confidence-building, the framework advocates for a blended approach that combines AI tools with traditional teaching methods. For example, teachers can use AI platforms like Elsa Speak or Speeko to supplement classroom instruction, ensuring that learners receive consistent and tailored support (Shafiee Rad, 2024). Ethical considerations, such as data privacy and the need for culturally relevant feedback, must also be addressed to ensure responsible implementation (Barrios-Beltran, 2024). Thus, this theoretical framework not only bridges existing gaps in the literature but also provides a structured pathway for advancing AI-mediated language learning practices, ultimately empowering learners to achieve greater speaking proficiency and confidence.

Figure 2: Proposed theoretical framework

Proposition Development

AI-Assisted Grammar Correction Influence Speaking Proficiency

AI-assisted grammar correction tools have demonstrated a significant influence on speaking proficiency by providing learners with immediate, personalized feedback that enhances their grammatical accuracy and fluency. These tools leverage advanced technologies such as natural language processing and speech recognition to identify errors in real-time, enabling learners to adjust their spoken output promptly and internalize correct linguistic patterns (Shadiev et al., 2024). For instance, platforms like Elsa Speak and SECF technology combine automated corrective feedback with pronunciation guidance, helping learners improve not only their grammar but also their intonation and stress patterns, which are critical components of speaking proficiency (Lara et al., 2024; Shafiee Rad, 2024). Furthermore, the reduction of cognitive load through targeted corrections allows learners to focus on fluency rather than accuracy, fostering smoother and more confident oral communication (Zou et al., 2024). This direct impact of AI-assisted grammar correction on speaking proficiency underscores its potential as a transformative tool in language learning environments. Based on these insights, the following proposition is developed:

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Preposition 1: AI-assisted grammar correction positively influences speaking proficiency

AI-Assisted Grammar Correction Affects Learner Confidence

AI-assisted grammar correction tools play a pivotal role in enhancing learner confidence by creating a supportive and non-judgmental environment for language practice. These tools provide immediate and personalized feedback, enabling learners to identify and correct errors without fear of embarrassment or criticism, which is crucial for reducing foreign language anxiety (Shadiev et al., 2024). For instance, platforms like ChatGPT and text chat-based AI systems allow learners to engage in low-stakes interactions, fostering a sense of safety and encouraging active participation in speaking tasks (Udeshinee et al., 2021). Additionally, the consistent reinforcement of progress through tailored feedback helps learners recognize their linguistic improvements, thereby strengthening their self-efficacy—a key determinant of confidence in task performance (Bandura, 1997). Studies have shown that learners who receive constructive and supportive feedback via AI tools exhibit higher levels of willingness to communicate (WTC), which directly contributes to increased confidence in using the target language (Fathi et al., 2024). Based on these insights, the following proposition is developed:

Preposition 2: AI-assisted grammar correction positively influences learner confidence

Learner Confidence influence Speaking Proficiency

Learner confidence serves as a critical mediating factor that directly influences speaking proficiency in second language acquisition. When learners possess higher levels of confidence, they are more likely to engage in speaking tasks, take risks, and persist in overcoming challenges, all of which contribute to the development of fluency and communicative competence (Bandura, 1997). Confidence reduces the anxiety associated with speaking in a foreign language, enabling learners to focus on expressing their ideas rather than fearing judgment or making errors (Shadiev et al., 2024). Empirical evidence suggests that learners with greater self-efficacy exhibit increased willingness to communicate (WTC), a key predictor of speaking proficiency, as they actively seek opportunities to practice and refine their oral skills (Fathi et al., 2024). Moreover, confident learners are better equipped to handle feedback and use it constructively to improve their spoken output, further enhancing their linguistic accuracy and fluency (Zou et al., 2024). Based on these insights, the following proposition is developed:

Preposition 3: Learner confidence positively influences speaking proficiency

The relationship between AI Assisted Grammar Correction and Speaking Proficiency through Learner Confidence

The relationship between AI-assisted grammar correction and speaking proficiency is significantly mediated by learner confidence, creating a synergistic pathway for language development. AI tools, such as ChatGPT and SECF technology, provide immediate and personalized feedback that not only enhances grammatical accuracy but also reduces language anxiety, thereby fostering learner confidence (Shadiev et al., 2024). This increase in confidence encourages learners to engage more actively in speaking tasks, take communicative risks, and persist in practicing their oral skills, all of which contribute to improved speaking proficiency (Fathi et al., 2024). Furthermore, confident learners are better able to utilize AI-generated feedback constructively, focusing on fluency rather than fearing errors, which aligns with the

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principles of Self-Efficacy Theory (Bandura, 1997). Empirical evidence underscores that the integration of AI tools in language learning environments supports this mediating role of confidence, ultimately bridging the gap between grammar correction and enhanced speaking outcomes (Zou et al., 2024).

Preposition 4: AI-assisted grammar correction indirectly influences speaking proficiency by first bolstering learner confidence

Conclusion

This study aimed to explore the transformative potential of AI-assisted grammar correction in enhancing speaking proficiency through the mediating role of learner confidence, and the objectives were largely achieved by proposing a robust theoretical framework and developing key propositions to guide future research and practice. The findings underscore the effectiveness of AI tools in providing personalized feedback, reducing language anxiety, and fostering learner engagement which are the key factors that contribute to improved fluency and communicative competence. By integrating the Interaction Hypothesis and Self-Efficacy Theory, the study successfully explains the interplay between AI-assisted grammar correction, learner confidence, and speaking outcomes, addressing the research objectives comprehensively.

The contribution of this study lies in its ability to bridge gaps in existing literature by offering a unified conceptual framework that merges insights from second language acquisition (SLA) and technology-enhanced learning. This framework not only elucidates how AI tools mediate learner confidence and speaking proficiency but also provides actionable guidance for educators on leveraging AI effectively in language classrooms. Practically, the study highlights the importance of balancing AI feedback with traditional teaching methods to address cultural nuances and mitigate risks such as overreliance on technology, ensuring a more holistic approach to language pedagogy. However, like any study, this research has its limitations. It relies heavily on self-reported data, which may introduce biases in interpreting learner experiences and perceptions. Additionally, the variability in AI tool accuracy across diverse linguistic contexts remains a challenge, potentially undermining the reliability of feedback provided. Furthermore, ethical concerns such as data privacy and the risk of overdependence on AI tools require careful consideration to ensure equitable and sustainable integration into educational settings.

The implications of the current findings are significant for both theory and practice. Theoretically, the study enriches the understanding of AI-mediated language learning by proposing a framework that integrates SLA theories with technological innovations. Practically, it empowers educators to adopt AI tools responsibly, emphasizing their role as supplements rather than replacements for human instruction. These insights pave the way for more effective strategies to enhance speaking proficiency and learner confidence in multilingual contexts.

Future research should address the identified limitations by exploring the longitudinal impacts of AI tools on speaking proficiency, particularly in underserved educational settings where access to personalized learning resources is limited. Additionally, studies should investigate the ethical considerations of AI integration, including data security and algorithmic bias, to ensure equitable learning opportunities for all learners. By addressing these challenges, future

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research can further refine the proposed framework and expand its applicability across diverse linguistic and cultural contexts.

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References

Asadi, M., Ebadi, S., & Mohammadi, L. (2025). The impact of integrating ChatGPT with teachers' feedback on EFL writing skills. Thinking Skills and Creativity. https://doi.org/10.1016/j.tsc.2025.101766

Bandura, A. (1997). Self-efficacy: The exercise of control . W.H. Freeman and Company.

Barrios-Beltran, D. (2024). Enriching the teaching-learning experience by using AI tools in the L2 classroom. AI in Language Teaching, Learning, and Assessment. https://doi.org/10.4018/979-8-3693-0872-1.ch004

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3 (2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Elsevier. (2023). Scopus: Content coverage guide. Retrieved from https://www.elsevier.com/solutions/scopus

Fathi, J., Rahimi, M., & Derakhshan, A. (2024). Improving EFL learners' speaking skills and willingness to communicate via artificial intelligence-mediated interactions. System. https://doi.org/10.1016/j.system.2024.103254

Ferrari, M. (2015). Writing narrative style literature reviews. Medical Writing, 24 (4), 202–207. https://doi.org/10.1179/2047480615Z.000000000311

Green, B. N., Johnson, C. D., & Adams, A. (2006). Writing narrative literature reviews for peer-reviewed journals: Secrets of the trade. Journal of Chiropractic Medicine, 5 (3), 101–117. https://doi.org/10.1016/S0899-3467(07)60142-6

Jamshed, M., Ahmed, A. S. M. M., Sarfaraj, M., & Warda, W. U. (2024). The impact of ChatGPT on English language learners' writing skills: An assessment of AI feedback on mobile. International Journal of Interactive Mobile Technologies. https://doi.org/10.3991/ijim.v18i19.50361

Kohnke, L., Zou, D., & Su, F. (2025). Exploring the potential of GenAI for personalised English teaching: Learners' experiences and perceptions. Computers and Education: Artificial Intelligence. https://doi.org/10.1016/j.caeai.2025.100371

Lara, M. S., Subhashini, R., Shiny, C., & Muthuperumal, S. (2024). Constructing an AI-assisted pronunciation correction tool using speech recognition and phonetic analysis for ELL. Proceedings of the 2024 10th International Conference on Communication and Signal Processing, ICCSP 2024 . https://doi.org/10.1109/ICCSP60870.2024.10543462

Liang, K.-H., Davidson, S., Yuan, X., & Yu, Z. (2023). ChatBack: Investigating strategies of providing synchronous grammatical error feedback in a GUI-based language learning social chatbot. Proceedings of the Annual Meeting of the Association for Computational Linguistics. https://doi.org/10.18653/v1/2023.bea-1.7

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Volume 7 Issue 24 (March 2025) PP. 1341-1355
DOI: 10.35631/IJMOE.724095
Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), Handbook of second language acquisition (pp. 413–468). Academic Press.

Shadiev, R., Feng, Y., Zhussupova, R., & Altinay, F. (2024). Effects of speech-enabled corrective feedback technology on EFL speaking skills, anxiety and confidence. Computer Assisted Language Learning. https://doi.org/10.1080/09588221.2024.2430761

Shafiee Rad, H. (2024). Revolutionizing L2 speaking proficiency, willingness to communicate, and perceptions through artificial intelligence: A case of Speeko application. Innovation in Language Learning and Teaching. https://doi.org/10.1080/17501229.2024.2309539

Sukumaran, S., & Khair, N. S. (2024). Exploring the role of AI platforms in improving English-speaking skills in Malaysian higher education institutions. Innovative Pedagogical Practices for Higher Education 4.0: Solutions and Demands of the Modern Classroom.

Udeshinee, W. A. P., Knutsson, O., Barbutiu, S. M., & Jayathilake, C. (2021). Text chat as a mediating tool in providing teachers' corrective feedback in the ESL context: Social and cultural challenges. Asian EFL Journal .

Zou, B., Du, Y., Wang, Z., & Zhang, W. (2024). An investigation into artificial intelligence speech evaluation programs with automatic feedback for developing EFL learners' speaking skills. SAGE Open. https://doi.org/10.1177/21582440231193818

Zou, B., Liviero, S., Ma, Q., & Xing, P. (2024). Exploring EFL learners' perceived promise and limitations of using an artificial intelligence speech evaluation system for speaking practice System. https://doi.org/10.1016/j.system.2024.103497