

## **The Use of Loora as Media to Check Grammar in Speaking for Undergraduated Students**

**Dandi Salmanda<sup>1</sup>, Ernita Daulay<sup>2</sup>**

Universitas Islam Negeri Sumatera Utara

Universitas Islam Negeri Sumatera Utara

Alamat e-mail : <sup>1</sup>[dandi0304212090@uinsu.ac.id](mailto:dandi0304212090@uinsu.ac.id), <sup>2</sup>[ernitadaulay@uinsu.ac.id](mailto:ernitadaulay@uinsu.ac.id)

### **ABSTRACT**

*This study examines the effectiveness of Loora, an artificial intelligence (AI)-based language learning application, in improving English speaking skills and grammatical accuracy among university students. Using a qualitative case study approach involving 10 participants, this study explores how Loora provides real-time and personalized feedback that encourages independent, reflective, and active language use in line with Swain's Output Hypothesis. The results indicate that Loora significantly improves students' confidence, awareness of grammatical errors, and speaking habits by providing detailed explanations and instant corrections. Despite limitations such as a small sample size and infrastructure challenges, the findings suggest that AI-based tools like Loora can effectively support language learning by making feedback more accessible and engaging. This study highlights the potential of integrating innovative technological solutions into language education to enhance learning autonomy, grammatical accuracy, and overall speaking ability.*

**Keywords:** *language learning, AI-based applications, grammatical accuracy, speaking skills, independent learning, feedback, educational technology.*

### **ABSTRAK**

Penelitian ini mengkaji efektivitas Loora, sebuah aplikasi pembelajaran bahasa berbasis kecerdasan buatan (AI), dalam meningkatkan kemampuan berbicara bahasa Inggris dan ketepatan tata bahasa di kalangan mahasiswa universitas. Dengan menggunakan pendekatan studi kasus kualitatif yang melibatkan 10 peserta, penelitian ini mengeksplorasi bagaimana Loora memberikan umpan balik real-time dan personal yang mendorong penggunaan bahasa secara mandiri, reflektif, dan aktif sesuai dengan Hipotesis Output Swain. Hasil penelitian menunjukkan bahwa Loora secara signifikan meningkatkan kepercayaan diri mahasiswa, kesadaran terhadap kesalahan tata bahasa, dan kebiasaan berbicara dengan memberikan penjelasan rinci dan koreksi instan. Meskipun terdapat keterbatasan seperti ukuran sampel yang kecil dan tantangan infrastruktur, temuan ini menyarankan bahwa alat berbasis AI seperti Loora dapat secara efektif mendukung pembelajaran bahasa dengan membuat umpan balik lebih mudah diakses dan menarik. Penelitian ini menyoroti potensi integrasi solusi teknologi inovatif ke dalam pendidikan bahasa untuk meningkatkan otonomi belajar, akurasi tata bahasa, dan kemampuan berbicara secara keseluruhan.

**Kata Kunci:** Pembelajaran bahasa, aplikasi berbasis kecerdasan buatan (AI), ketepatan tata bahasa, keterampilan berbicara, pembelajaran mandiri, umpan balik, teknologi pendidikan.

## **A.Introduction**

In today's digital era, technology has transformed the way we learn languages. One of the latest innovations in language learning is *Loora*, an AI-powered application designed to help users improve their English-speaking skills through real-time conversations. *Loora* acts as a personal language coach, providing instant feedback on pronunciation, fluency, and grammar. Unlike traditional learning methods, which often lack immediate correction, *Loora* allows learners to practice anytime and anywhere, making language learning more accessible and personalized. By using advanced speech recognition and AI-driven analysis, the app identifies grammar mistakes and suggests real-time corrections, helping learners refine their speaking accuracy and build confidence.

English is an important language for worldwide communication in education, business, science, technology, and daily life. Mastery of English makes both academic and professional possibilities, allowing people to engage in global debate, access information, and interact across boundaries. However, many intermediate learners fail to speak effectively because of continuous grammatical mistakes, which may hinder effective communication and affect confidence. These

difficulties are sometimes increased by little preparation and focusing on written tests rather than real-life speaking situations (Bihari Dash, 2022).

One of the main issues faced in language learning is the gap in access to educational technology. Artificial intelligence (AI)-based learning apps like *Loora* have great potential to help students learn independently, especially in practicing English speaking skills with immediate feedback. However, the digital divide between developed and developing countries poses a global challenge in accessing these language learning-enabling technologies (Tomczyk, 2021). Unequal access to quality devices and internet is still a major barrier to the adoption of technologybased solutions in many developing countries (Dijk & Hacker, 2003). The use of advanced technologies such as AI in education can widen the gap between students who have access to these technologies and those who do not.

In Indonesia, another challenge faced is the low level of English speaking among university students, especially in terms of grammatical accuracy. A study shows that the main factors for low English speaking ability are lack of practice as well as limitations in the application of effective teaching methods (Aini & Lubis, 2023). This is exacerbated by the lack of immediate feedback that can help

students correct their errors in speaking. Furthermore, although the government has introduced the Merdeka Belajar initiative to encourage innovation in education, the use of AI-based technology in English language teaching in Indonesian schools is still limited (Suryani, I, 2020). This issue is further exacerbated by the limited technological infrastructure in some parts of Indonesia, resulting in inequalities in the application of learning technologies (Isabella et al., 2024).

A major problem faced by students is the lack of immediate and effective feedback on grammatical errors when they practice speaking. Often times, the students in the one of university in medan feel uncomfortable to speak for fear of making mistakes, which ultimately hinders the development of their speaking skills. In this context, the use of technology to aid the language learning process is becoming increasingly important. One such technology that can be utilized is Loora, an artificial intelligence-based application designed to provide immediate feedback on grammatical errors in speaking skills.

The purpose of this study is to explore the use of Loora as a medium in checking grammar in university students' speaking skills. This research will evaluate the effectiveness of Loora app in improving students' grammar

accuracy and its impact on their confidence in speaking English.

This research is important because it provides practical solutions for teachers and students to overcome challenges in teaching speaking skills. By utilizing Loora technology, it is expected that students can be more confident in speaking and can significantly reduce their grammatical errors.

Several previous studies have shown that immediate feedback is highly effective in improving students' language skills (Mohebbi, 2024). However, studies examining the use of AI-based applications in the context of language education, specifically for grammar in speaking, are still relatively limited. AI apps are gradually altering language instruction by providing customized, interactive, and instantaneous feedback, which is especially beneficial for improving grammar, pronunciation, and conversational fluency when speaking. Recent systematic reviews and meta-analyses highlight that AI-powered tools, such as chatbots and intelligent tutoring systems, can significantly enhance language proficiency, especially in areas like grammar and vocabulary, and foster learner motivation and engagement through adaptive and accessible learning experiences (Qassrawi & Al Karasneh, 2025).

Several key questions will guide this study: the extent to

which the Loora application helps students correct grammatical errors while speaking, the level of improvement in students' speaking skills after using Loora, and students' perceptions of its use in language learning. Understanding these aspects will provide valuable insights into the effectiveness of AI-based applications in supporting English language education.

Based on these considerations, this study aims to provide empirical evidence on the role of AI-driven feedback in enhancing students' speaking accuracy. By integrating technological advancements into English education, this research seeks to bridge the gap between traditional language learning approaches and modern, technology-assisted methods, ultimately fostering more confident and proficient speakers. Based on mentioned above, the research question of this research is; Is Loora effective as a media for checking grammar in speaking' students?

## **B. Methods**

This study employs a qualitative research approach to deeply explore the experiences and perceptions of students in using the Loora application to improve their speaking abilities, particularly focusing on grammatical accuracy (Creswell, 2014). The research design adopted is a case study, which aims to provide an in-depth

understanding of how Loora directly impacts the development of speaking skills in students (Yin, 2018). The case study approach is well-suited for this research, as it allows the exploration of real-life interactions between students and the application in their learning process. The study's primary objective is to investigate the role of Loora in addressing the common challenges faced by students in speaking, such as grammatical errors, fluency issues, and lack of confidence, by offering immediate feedback and personalized learning support.

This study involved 10 university students with basic to intermediate English proficiency, who were selected through purposive sampling based on their willingness to participate in the learning sessions using the Loora application. The participants were chosen to represent a diverse range of experiences with English language learning, ensuring that the findings could capture various perspectives and challenges. Their involvement aimed to provide insights into the effectiveness of the Loora app in enhancing speaking skills, particularly grammatical accuracy, within the context of individual practice and immediate feedback.

The main data points for this study were gathered through in-depth interviews, observations, and questionnaire responses from undergraduate students in the English Education Department of a

University in North Sumatera. These individuals were chosen specifically for their desire to engage in speaking practice using the Loora application and their basic to intermediate English skills. The research included ten students, who provided a variety of viewpoints on their experiences using the program to increase grammatical correctness in spoken English.

Observation is carried out to gather students' experiences with Loora. The researcher observes students using the Loora app to document their emotions and the app's influence on their learning process. The collected data will be examined thematically for interview and observation data, and descriptively for questionnaire replies. Thematic analysis identifies essential themes that arise from students' views and experiences, whereas descriptive statistics give a numerical summary of students' impressions (Braun & Clarke, 2006).

The data for this study were examined using a qualitative interpretative method, with an emphasis on understanding participants' lived experiences and personal perspectives of using the Loora program to help their spoken grammar development. The major approach used was thematic analysis, which followed Braun and Clarke's (2006) paradigm and allowed the researcher to discover patterns of meaning throughout the dataset through a rigorous,

iterative procedure.

Data from interviews, observational notes, and open-ended questionnaire responses were reviewed several times to ensure immersion and familiarity. The researcher conducted preliminary coding by finding noteworthy sentences, concepts, and expressions that indicated participants' experiences, obstacles, and perceived gains in their speaking skills. These codes were not predefined; they formed naturally from the data. As themes emerged, such as improved grammatical awareness, confidence, and learner autonomy, the researcher continued to consider the link between these emergent meanings and the study's key research objectives.

To enhance the analysis's reliability and trustworthiness, data triangulation was used to compare findings from various sources. This method allowed the researcher to gain a deeper understanding of the topic being studied. Throughout the process, flexibility was maintained, recognizing the researcher's involvement in data interpretation as well as the co-construction of meaning in qualitative research.

The study's interpretative and layered analysis intended to provide an accurate, nuanced picture of how AI-based language learning tools such as Loora moderate students' acquisition of spoken grammar in real-world learning environments.

### **C.Result and Discussion**

This research is based on a series of in-depth interviews with students who use the Loora app. It has identified three main themes that reflect users' experiences of using AI-based technology to learn spoken English grammar. The analysis will present the following:

#### **1. Effectiveness in real-time grammar correction**

Based on the interview results, it was evident that Loora was effective in identifying and providing immediate corrections to grammatical errors during speech. The app can detect common errors relating to tenses, prepositions and sentence structure with a high degree of accuracy. As a participants 1 said:

*"As an English Education student, I am quite familiar with grammar, but I often make small mistakes. Loora helped me to identify my recurring errors. For example, I have just realised that I always use the present perfect tense incorrectly for experiences. This app doesn't just tell you where you've gone wrong; it also explains why." (P1)*

Participants were able to identify patterns of errors that had previously gone unnoticed through the use of the Loora app. One example is the incorrect use of the present perfect tense to express

experience. Loora is so helpful because it not only points out participants' mistakes, but also explains why they are wrong. This line align with view's participants 4.

*"Honestly, the important thing when I speak English is to speak fluently; the grammar tends to get muddled up. But when I use Loora, I can tell the difference between fatal mistakes and ones that can still be tolerated. This means I can focus on fixing the important things first, and improve my fluency" (P4).*

When speaking English, fluency is often prioritised over grammatical accuracy, which tends to be overlooked or forgotten when speaking spontaneously. Using the Loora app enables learners to distinguish between fatal errors and those that are still tolerable in the context of communication. With this distinction, learners can focus first on improving the most important aspects, without feeling under pressure to perfect all aspects of grammar immediately. This approach indirectly improves speaking fluency while building awareness of correct language structures. Then Participant 2's experience shows;

*"I noticed that the way Loora gave the correction was very detailed. Not only did she point out the mistakes, but she also gave*

*alternative sentences that could be used in other situations. It's really like having a private tutor!" (P2)*

Loora provides corrective feedback that is both diagnostic and educational. As well as highlighting linguistic errors, the app suggests alternative sentences for different contexts, encouraging a broader understanding of language use. This feature provides a learning experience similar to that of interacting with a private tutor, making the correction process more effective and meaningful from a pedagogical perspective.

*"When presenting, I like to use complicated sentences, and it becomes a mess. Loora really helped me break down my sentences into simpler ones. What's cool is that she can differentiate between grammar mistakes and language styles that are just preferences." (P7)*

In the context of oral presentations, using sentences that are too complex can make it difficult to convey ideas effectively. Loora is a tool that breaks down long sentences into simpler, clearer forms without altering the meaning. Another advantage is its ability to distinguish between objective grammatical errors and subjective stylistic choices. Thus, the feedback provided is corrective yet respectful of the uniqueness of

language style, making the learning process feel more personalised and relevant.

## **2. Boosting self-confidence**

Confidence is an important factor in speaking English fluently. Most students are shy when practising, as they are afraid of making mistakes with their grammar. This hinders their English-speaking skills. The Loora app has been proven to solve this problem. Loora increases self-confidence, as evidenced by participants' experiences of using Loora.

*"Previously, I was always nervous when I had to speak in front of the class such as during a presentation. By regularly practising with Loora, I was able to map out my typical mistakes and reduce them by about 70%. Now I'm more confident because I have a mental "safety net" that my grammar is more controlled." (P10)*

Regular practice with Loora enables users to identify and significantly reduce patterns of language errors. This directly increases confidence, as users feel they have better control over grammatical aspects, and this confidence acts as a 'mental safety net' that improves overall communication performance.

*"Before using Loora, I was always nervous and afraid of making mistakes when I*

*had to speak English. Especially in front of a class or presentation, I was worried that my grammar would be messy and embarrassing. But after using Loora regularly, I slowly became more confident. This app is like having a friend who is always ready to correct my mistakes properly” (P8)*

Regular use of the Loora app can increase confidence in speaking English. The app provides precise and supportive corrections, helping to reduce anxiety and gradually improve language skills.

### **3. Loora as Self-Learning Media**

One of the key findings of this research is the effectiveness of Loora as an independent learning tool for students. Based on the interview results, some participants said that using this application gave them the freedom and convenience to learn to speak English flexibly outside the classroom, and motivated them to do so. The following narratives illustrate this experience.

*“I can practise speaking at any time, without having to wait for class. Loora helps me to identify and correct my own mistakes, making learning more flexible.” (P9)*

The use of Loora provides flexibility for students to practice speaking English at any time

without being tied to class time. The app allows students to independently find and correct errors in speaking, making the learning process more efficient and personalised.

*“With Loora, I don’t feel embarrassed asking my teacher for help. It’s like having a friend who’s always ready to help whenever I want to practise.” (P5)*

Loora acts as an alternative medium that enables students to learn independently, free from the embarrassment and awkwardness of making mistakes. With direct and supportive corrections, students feel supported in their speaking practice without always having to depend on the teacher.

*“Loora makes me practise more diligently at home because I know she will correct me immediately. This really helps to improve my speaking skills, so I don’t always have to rely on the teacher.” (P4)*

Loora's presence encourages students to practise speaking more diligently outside the classroom. The instant and clear corrections encourage students to continue developing their speaking skills sustainably, without feeling pressured or afraid of negative feedback.

### **4. Increasing Grammar in Speaking**



The interview results showed that consistent use of the Loora app improved participants' spoken grammar. Participants said they became more aware of errors they had previously overlooked and were able to use more appropriate structures. Participant 2 said;

*"After used Loora, made me realize that grammar is important not just for writing, but for speaking as well. I became more diligent about correcting my sentences during practice so that I wouldn't make too many mistakes while speaking." (P2)*

Using Loora helps participants understand that grammar is important not only in writing but also in speaking, where it greatly affects clarity and confidence. This motivates them to take improving their spoken grammar more seriously. Participant 4 revealed:

*"I didn't used to think much about grammar when speaking English as long as I was understood. But since using Loora, I've realized that I often make tense errors, such as using 'have' or 'has' incorrectly. Now, I think more before I speak so that I don't make mistakes." (P4)*

This experience demonstrates the efficacy of Loora in modifying participants' speaking habits, transitioning them from a state of carelessness to one of heightened caution in selecting appropriate sentence structures. The application's capacity to provide immediate

feedback enabled the subjects to acquire knowledge from their repeated errors.

The results of this study suggest that using the Loora application, an AI-based medium, significantly improves the grammar skills of English education students in speaking contexts. Through in-depth interviews, we found that students became more aware of using correct sentence structures, especially with regard to tense, subject-verb agreement, and complex sentence patterns. These findings demonstrate that Loora's direct and detailed corrections fix errors on the spot and contribute to a deeper conceptual understanding (Kaiser, 2025). Loora does more than point out errors; it explains why an error occurred and offers more appropriate alternatives. This has a long-term effect on forming more grammatically accurate language habits (Z. Wang & Wang, 2023).

These findings can be understood through the lens of second language learning theories. According to Saito (2021), Corrective feedback improves second language pronunciation accuracy, but its effectiveness varies greatly among learners, especially when providing model pronunciation forms and focusing on communicatively important features. The Loora app effectively fulfills this role by providing explicit, educational feedback. Additionally, Swain's (2005) Output Hypothesis is relevant here; it states that learning occurs optimally when learners actively produce

language and receive appropriate corrections (De Jesus Sales, 2020). Interactions between learners and Loora provide opportunities for free language production under the supervision of a corrective system. In this context, Loora can be seen as a facilitator of safe, socially pressure-free language practice that provides direct, relevant feedback (Zhang et al., 2024).

Furthermore, Loora increasing self-control, reflection, and independence in the learning process. It is align with Aldosari et al., (2023) found, higher levels of self-assessment and reflective thinking skills in EFL university students lead to increased enjoyment and productive immunity in language learning. With Loora users can determine their own practice time and duration and receive immediate feedback, eliminating the need to rely on teachers or peers. This increases motivation and the frequency of independent speaking practice among students (Arifani et al., 2025). In other words, Loora impacts not only language skills, but also fosters a more independent and reflective learning attitude (Kaiser, 2025). This reflects a positive shift toward a more active, learner-centered approach to learning (Z. Wang & Wang, 2023).

These findings have significant implications for the field of English language education, particularly technology-based learning. Teachers and educational institutions may consider using applications like Loora

to supplement classroom learning. Digital media that provides personalized, contextual corrections can strengthen students' understanding of grammar in real communication situations (W. Wang, 2024). In order to assist students grasp grammar as it works in real conversation rather than in isolated phrases, advanced correction models that employ context, such as sentence or paragraph level information produce more accurate and pertinent corrections (Sukarno, 2025). Additionally, Loora can bridge the gap between grammar theory and authentic language use.

However, there are a number of limitations to this study that should be taken into account. First off, the number of participants is still small and does not accurately represent the whole student body. Second, quantitative data and speaking performance assessments before and after using Loora were not included in the research data, which was gathered only through interviews. This makes it more difficult for the researchers to quantify the impact objectively. Furthermore, these results are descriptive and cannot yet be used to draw conclusions about the overall benefits of Loora because there are no comparisons with other learning resources. It is thus highly advised that more study be done using mixed-method designs or quasi-experiments to bolster the empirical data pertaining to this application's efficacy.

Consequently, this discussions demonstrates that Loora is not only successful in raising students' spoken grammatical correctness but also in encouraging self-assurance, a readiness to take linguistic chances, and a need for consistent rehearsal. Loora facilitates flexible, individualized language learning that promotes student autonomy and meets the demands of 21st-century education.

### **E. Conclusion**

This research highlights the Loora app's considerable potential as an innovative and effective tool for improving English language acquisition among university students. adopting a qualitative case study method with 10 participants, the study reveals numerous significant benefits of adopting Loora in language instruction. The software gives precise, real-time grammar corrections and extensive explanations, allowing students to better notice and comprehend their faults. This rapid and individualized feedback not only enhances students' confidence in their speaking talents, but it also promotes autonomous and reflective learning, supporting a learner-centered approach that is consistent with current educational approaches.

Furthermore, Loora's emphasis on active language development and correction is consistent with Swain's Output Hypothesis, which holds that language learners enhance their competence via meaningful use of language and self-correction. By

allowing for individual practice, the app bridges the gap between theoretical grammar knowledge and actual communication abilities, making language learning more interesting and relevant to real-world situations. Participants indicated that Loora's extensive feedback and explanations raised their awareness of grammatical precision, resulting in better speaking habits and increased motivation to practice consistently.

Nevertheless, some limitations of the Loora app were also identified. One key concern is that to access its full range of features. Users must subscribe to the premium version to access the features maximally. This poses a challenge for learners with financial constraints, such as students, who may not be able to afford a paid subscription. Additionally, the app requires a stable internet connection to function properly. The users who experienced inconsistent connectivity found it difficult to engage in smooth conversations, which disrupted their learning flow and reduced the overall effectiveness of the app. These barriers suggest that while Loora offers promising support for spoken grammar improvement, issues of affordability and internet access may hinder equal learning opportunities for all users.

Despite these hopeful findings, the study admits certain limitations, such as a small sample size and the qualitative character of the research, which may limit the data' generalizability. Additionally, problems with technical infrastructure

and accessibility in particular places may impede the general use of such AI-powered solutions. Further study with bigger, more varied populations and quantitative metrics is required to confirm and build on these preliminary findings.

To summarize, the integration of AI-based apps such as Loora has great potential for assisting language learners, particularly in technology-enabled educational situations. Loora, by delivering instant, individualized, and accessible feedback, can help students improve their grammatical accuracy, speaking confidence, and independent learning. As educational technology advances, such technologies have the potential to change traditional language training, making it more interactive, effective, and personalized to individual learners' requirements. Continued research and development in this field are required to optimize the benefits and overcome the hurdles of using AI-driven language learning systems.

## REFERENCES

- Aini, N., & Lubis, Y. (2023). *INVESTIGATING EFL STUDENTS' SPEAKING ANXIETY: A CASE STUDY AT ENGLISH DEPARTMENT OF UINSU*. 12(May), 169–183.
- Aldosari, M., Heydarnejad, T., Hashemifardnia, A., & Abdalgane, M. (2023). The interplay among self-assessment, using reflection for assessment, classroom enjoyment, and immunity: into prospects of effective language learning. *Language Testing in Asia*, 13, 1–20.
- <https://doi.org/10.1186/s40468-022-00213-1>
- Arifani, Y., Sari, H. P., & Ma'rifah, U. (2025). The Correlation between Self-Regulated Learning and Learning Motivation toward Speaking Skill. *Indonesian Teaching English to Speakers of Other Languages Journal*. <https://doi.org/10.30587/inatesol.v1i2.9387>
- Bashori, M., van Hout, R., Strik, H., & Cucchiarini, C. (2024). 'Look, I can speak correctly': learning vocabulary and pronunciation through websites equipped with automatic speech recognition technology. *Computer Assisted Language Learning*, 37(5–6), 1335–1363. <https://doi.org/10.1080/09588221.2022.2080230>
- Bihari Dash, D. B. (2022). Significance of Globalisation and English Language. *International Journal on Studies in English Language and Literature*, 10(5), 10–16. <https://doi.org/10.20431/2347-3134.1005002>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology; In qualitative research in psychology. *Uwe Bristol*, 3(2), 77–101. [https://psychology.ukzn.ac.za/?m\\_docs-file=1176](https://psychology.ukzn.ac.za/?m_docs-file=1176)
- Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). In *SAGE Publications*. <https://doi.org/10.4324/9780429469237-3>
- De Jesus Sales, A. (2020). *The Output Hypothesis and its influence in*

- the second language learning/teaching: An interview with Merrill Swain. 20, 1–12. <https://doi.org/10.15210/interface.s.v20i0.18775>
- Dijk, J. van, & Hacker, K. (2003). The Digital Divide as a Complex and Dynamic Phenomenon. *The Information Society*, 127(3), 48. <https://doi.org/10.1080/01972240390227895>
- Isabella, I., Alfitri, A., Saptawan, A., Nengyanti, N., & Baharuddin, T. (2024). Empowering Digital Citizenship in Indonesia: Navigating Urgent Digital Literacy Challenges for Effective Digital Governance. *Journal of Governance and Public Policy*, 11(2), 142–155. <https://doi.org/10.18196/jgpp.v11i2.19258>
- Kaiser, D. (2025). Artificial intelligence integration in three iOS pronunciation apps. *Journal of Second Language Pronunciation*. <https://doi.org/10.1075/jslp.24052.kai>
- Mohebbi, A. (2024). Enabling learner independence and self-regulation in language education using AI tools: a systematic review. *Cogent Education*. <https://doi.org/10.1080/2331186x.2024.2433814>
- Punkhoom, W., & Jehma, H. (2023). Virtual Feedback: Exploring and Analyzing Students' Acceptance as a Tool for Developing English Language Skills. *International Journal of Emerging Technologies in Learning*, 18(12), 32–42. <https://doi.org/10.3991/ijet.v18i12.34939>
- Qassrawi, R., & Al Karasneh, S. M. (2025). Redefinition of Human-Centric Skills in Language Education in the AI-Driven Era. *Studies in English Language and Education*, 12(1), 1–19. <https://doi.org/10.24815/siele.v12i1.43082>
- Saito, K. (2021). Effects of Corrective Feedback on Second Language Pronunciation Development. *The Cambridge Handbook of Corrective Feedback in Second Language Learning and Teaching*. <https://doi.org/10.1017/9781108589789.020>
- Sukarno, S. (2025). Enhancing Grammar Competence in TEIL: A Contextual and Meaningful Framework. *Formosa Journal of Multidisciplinary Research*. <https://doi.org/10.55927/fjmr.v4i4.149>
- Suryani, I, and D. F. (2020). The Impact of 'Merdeka Belajar' Program on Indonesian Education System. *International Journal of Educational Innovation and Research*, 8(2), 45–60. <https://doi.org/10.5430/jct.v13n2p299URL>
- Wang, W. (2024). English Grammar Error Detection and Intelligent Assisted Correction Using Autoencoders. *Proceedings of the 2024 International Conference on Machine Intelligence and Digital Applications*. <https://doi.org/10.1145/3662739.3672330>
- Wang, Z., & Wang, J. (2023). A Study on the Effectiveness of Speaking Apps in Improving Students' Speaking Skills. *Journal of*

*Education, Humanities and Social  
Sciences.*

[https://doi.org/10.54097/ehss.v19  
i.11022](https://doi.org/10.54097/ehss.v19i.11022)

Yin, R. K. (2018). Case Study  
Research and Applications:  
Design and Methods, 6th Edition.  
In *SAGE Publications*.

Zhang, C., Meng, Y., & Xinyu. (2024).  
Artificial intelligence in EFL  
speaking: Impact on enjoyment,  
anxiety, and willingness to  
communicate. *System*.  
[https://doi.org/10.1016/j.system.2  
024.103259](https://doi.org/10.1016/j.system.2024.103259)