



## AI Corrective Feedback and Thai EFL Writing: A Literature-Based Review

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### Abstract

**Background and Aim:** The rapid development of artificial intelligence (AI) has introduced new possibilities for providing corrective feedback in English as a Foreign Language (EFL) writing instruction. In Thai higher education contexts, EFL learners continue to experience persistent difficulties in academic writing, while teachers face time and workload constraints in delivering detailed and individualized feedback. This study aims to review existing literature on Thai EFL writing difficulties, corrective feedback, and AI-assisted feedback in order to explore the pedagogical potential of AI-generated corrective feedback in EFL writing development.

**Materials and Methods:** This study adopts a literature-based review approach. Relevant studies were retrieved from major academic databases, including Scopus, ERIC, and Google Scholar. The selection criteria focused on peer-reviewed publications addressing EFL writing, corrective feedback, and AI-assisted feedback, with particular attention to studies involving Thai or comparable EFL contexts. The selected literature was analyzed thematically to identify recurring patterns in writing challenges and feedback practices.

**Results:** The review reveals that Thai EFL university students commonly encounter difficulties related to grammatical accuracy, lexical choice, coherence, and academic writing conventions. The thematic analysis indicates that AI-generated corrective feedback is particularly effective in addressing surface-level language errors and providing immediate and consistent feedback, while it remains limited in offering context-sensitive and discourse-level guidance. Studies also highlight the need for teacher mediation when integrating AI feedback into writing instruction.

**Conclusion:** This review concludes that AI-assisted corrective feedback can function as a valuable complement to teacher feedback in Thai EFL writing classrooms. When used alongside human guidance, AI tools have the potential to enhance writing development by supporting frequent revision and individualized learning. Future research is encouraged to conduct empirical studies examining the combined use of AI-generated and teacher-provided feedback in Thai higher education contexts.

**Keywords:** AI Feedback; EFL Writing; Corrective Feedback

### Introduction

Writing is a highly versatile skill that serves multiple purposes across educational and professional contexts (Graham, 2006). Written communication, on the other hand, serves as an additional means for individuals to articulate their thoughts and gain insights into the perspectives of others. Academic writing is widely understood to adhere to the communicative goals and disciplinary conventions of specific discourse communities (Berkenkotter & Huckin, 1995; Geisler, 1994; Hyland, 2000; Swales, 1990). Walsh (2010) further emphasizes the central role of writing in higher education and professional contexts. Successful writing involves careful organization of ideas, clarity of expression, appropriate use of grammatical structures, and thoughtful lexical choices in order to meet the expectations of the intended audience (Hedge, 1988). We must delve into the writing challenges faced by university students and assist them.

According to Richards and Renandya (2002), composing writing poses a significant challenge for English as a Foreign Language (EFL) learners due to their limited language proficiency and linguistic knowledge, as noted by Weigle (2002). Various studies have explored the language learning difficulties faced by Thai students. In a study conducted by Pawapatcharandom (2007) among Thai undergraduates in international university programs in Thailand, writing emerged as the most challenging aspect of the English language. Numerous challenges in writing have been observed among Thai EFL writers, as documented in various studies (Abas & Bakir, 2013; Kao & Reynolds, 2017;





Myles, 2002). These studies aim to enhance educators' comprehension of students' struggles in composing texts. Those facing writing difficulties may encounter issues in several aspects of writing, including grammar, conventions, punctuation, capitalization, spelling, and fundamental elements of writing. Additionally, challenges may arise in developing ideas within a second or foreign language (L2/FL), maintaining consistency in organizing thoughts, employing proper grammatical structures, selecting appropriate vocabulary, and lacking strategic awareness during the writing process. Furthermore, difficulties may extend to activating thought processes and generating ideas (Ghabool, 2012)

Pawapatcharandom (2007) categorized Thai students' writing difficulties into four major areas, including time constraints, academic writing demands, grammatical accuracy, and text organization. These difficulties were found to stem not only from limited knowledge of writing conventions but also from personal and affective factors such as insufficient practice, negative attitudes toward writing, writing anxiety, low motivation, and inadequate instructional support. Similarly, Rostanti Toba, Noor, and Sanu (2019) emphasized the need for an integrated approach to teaching writing that addresses both learners' challenges and instructional practices in EFL classrooms.

To develop competence in writing, EFL learners need explicit instruction in a range of fundamental writing and learning strategies. A number of language learning strategy taxonomies have been proposed in the field of second language acquisition (Cohen, 1998; O' Malley & Chamot, 1990; Oxford, 1990; Wenden & Rubin, 1987). Among these, Oxford's (1990) six-category strategy system and O' Malley and Chamot's (1990) three-category taxonomy have received considerable attention in L2 research. Despite the recognized importance of writing in higher education, English as a Foreign Language (EFL) learners continue to experience persistent difficulties in producing academically appropriate texts. These challenges are particularly evident in Thai higher education contexts, where students often struggle with grammatical accuracy, lexical choice, coherence, and academic conventions (Pawapatcharandom, 2007; Rostanti Toba et al., 2019). While such difficulties are not unique to Thailand, the local instructional context presents additional constraints that intensify the problem. Recent advances in artificial intelligence (AI) have introduced new possibilities for addressing this challenge. AI-generated corrective feedback, particularly through automated writing evaluation systems and generative AI tools, offers immediate and consistent responses to learners' writing. While prior studies and reviews have examined AI-assisted feedback in EFL contexts more broadly, limited attention has been given to the specific experiences and needs of Thai EFL university students. Existing reviews often focus on technological effectiveness or learner outcomes without sufficiently contextualizing how AI feedback may respond to local instructional constraints in Thailand. Therefore, a clear research gap remains regarding how AI-generated corrective feedback can be pedagogically positioned to support EFL writing development within Thai higher education.

## Objectives

To synthesize existing research evidence on common writing difficulties experienced by Thai EFL university students, with particular attention to recurring linguistic and academic challenges reported in previous studies.

To critically analyze the role, characteristics, and pedagogical functions of corrective feedback in EFL writing instruction, drawing on both teacher-provided and AI-generated feedback practices.

To evaluate the pedagogical implications of integrating AI-generated corrective feedback with traditional teacher feedback and to propose a conceptual framework for its effective application in Thai higher education EFL writing contexts.

## Methodology

This study employed a literature-based review design to systematically examine existing research on AI-generated corrective feedback and its role in EFL writing, with particular emphasis on Thai higher education contexts. The methodology consisted of three main stages: literature search, selection, and thematic analysis.





## 1. Literature Search Strategy

Relevant studies were retrieved from major academic databases, including Scopus, ERIC, and Google Scholar. The search process was guided by a combination of keywords such as *EFL writing*, *corrective feedback*, *AI feedback*, *automated writing evaluation*, and *Thai EFL context*. Boolean operators (e.g., AND, OR) were used to refine search results and ensure comprehensive coverage of the topic.

## 2. Inclusion and Exclusion Criteria

To ensure the quality and relevance of the selected literature, the following criteria were applied:

- Inclusion criteria:
  - Peer-reviewed journal articles and conference papers
  - Studies focusing on EFL writing and corrective feedback
  - Research addressing AI-assisted feedback or automated writing evaluation
  - Studies conducted in Thai contexts or comparable EFL environments
- Exclusion criteria:
  - Non-academic publications (e.g., blogs, opinion articles)
  - Studies not directly related to writing or feedback
  - Duplicated or inaccessible full-text articles

## 3. Data Analysis Procedure

The selected studies were analyzed using a thematic analysis approach. This process involved:

1. Initial reading to gain familiarity with the data
2. Coding key concepts related to writing difficulties, feedback types, and AI applications
3. Categorizing themes into recurring patterns (e.g., linguistic challenges, feedback effectiveness, limitations of AI)
4. Synthesizing findings to identify relationships and research gaps

The analysis aimed to provide a structured understanding of how AI-generated corrective feedback has been conceptualized and applied in EFL writing instruction.

## 4. Reliability and Validity

To enhance the credibility of the review, multiple sources from reputable databases were cross-checked, and only peer-reviewed publications were included. The use of transparent selection criteria and systematic analysis procedures ensured the consistency and reliability of the findings.

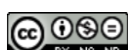
## Results

### Writing Challenges in Thai EFL Contexts

In many Thai universities, EFL writing instruction is conducted in contexts characterized by large class sizes and heavy teaching workloads. These conditions substantially limit instructors' ability to provide timely, detailed, and individualized written feedback. Previous research has demonstrated that feedback is most effective when it is frequent, specific, and responsive to learners' needs (Hattie & Timperley, 2007; Black & Wiliam, 2009). However, under existing institutional constraints, teachers often struggle to meet these pedagogical demands, resulting in a gap between ideal feedback practices and classroom realities. This situation highlights a growing need for alternative or supplementary feedback mechanisms that can support both teachers and learners in EFL writing classrooms.

Writing serves not only as a means for students to demonstrate language proficiency but also as an important diagnostic tool through which teachers monitor learners' progress and identify areas of difficulty. To achieve higher levels of writing proficiency, systematic evaluation of written work is essential. In response to increasing instructional demands, online and computer-based writing evaluation systems have emerged as potential solutions. Such systems enable learners to document their writing development over time and promote self-reflection throughout the writing process (Hamp-Lyons, 2002). Within this context, writing feedback has been conceptualized as a central pedagogical mechanism that supports learning by guiding learners to notice problems, reflect on performance, and revise their texts accordingly (Creswell, 2000; Graham, 2006). The centrality of feedback in EFL writing thus provides a necessary foundation for examining the nature and function of corrective feedback in instructional settings.

### Corrective Feedback in EFL Writing Instruction





### ***Definition and Types of Feedback***

In the broader field of educational research, Kluger and DeNisi (1996) define feedback as information provided to learners regarding aspects of their performance. Expanding on this definition, Hattie and Timperley (2007) describe feedback as a multifaceted process that may originate from various sources, including teachers, peers, parents, and learners themselves. In EFL writing classrooms, feedback typically takes the form of responses to students' written output and plays a critical role in supporting learning and revision.

Feedback in writing instruction can be categorized into several types according to its pedagogical function. Corrective feedback focuses on identifying and addressing specific linguistic errors to help learners recognize inaccuracies and improve language accuracy. Positive feedback highlights successful language use and effective writing strategies, reinforcing learners' motivation and confidence. Negative feedback, when delivered constructively, draws attention to areas requiring improvement and encourages learners to revise their work (Jaehnig & Miller, 2007). Among these types, corrective feedback has attracted particular attention in EFL research due to its direct role in facilitating language development through revision.

### ***The Importance of Corrective Feedback in EFL Writing***

Corrective feedback is commonly understood as guidance provided by instructors to help learners move from their current level of performance toward desired learning outcomes (Hattie & Timperley, 2007). From a second language acquisition perspective, VanPatten (2003) emphasizes that corrective feedback, particularly when it involves negotiation of meaning, can assist learners in noticing linguistic problems and establishing connections between form and meaning. Empirical evidence further supports the effectiveness of corrective feedback in EFL writing contexts, with studies demonstrating its positive impact on learners' grammatical accuracy and writing development (Ellis, Loewen, & Erlam, 2006; Bitchener, Young, & Cameron, 2005).

Rather than emphasizing learners' deficiencies, effective corrective feedback focuses on guiding learners toward solutions and improvement. By highlighting what learners can do to enhance their writing, corrective feedback encourages trust in the feedback process and promotes sustained engagement with revision. This pedagogical value, however, is closely tied to the availability of timely and individualized feedback—conditions that are often difficult to achieve in large EFL classrooms.

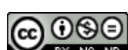
### ***AI-Generated Feedback and Automated Writing Evaluation***

Artificial intelligence (AI) refers to computer-based systems designed to replicate aspects of human cognition and decision-making (Russell & Norvig, 2016). Advances in AI technologies, including automatic speech recognition and automated writing evaluation (AWE) systems, have been increasingly applied to support EFL learners' language development. Research suggests that AI-based feedback tools can positively influence learners' linguistic performance and are generally perceived favorably by students.

AWE systems have been widely studied for their ability to provide rapid assessments of student writing and reduce teachers' feedback workload (Wilson & Roscoe, 2020). These systems typically employ natural language processing techniques to evaluate writing and generate feedback. Prior studies report positive effects of AWE on student engagement, writing length, and surface-level accuracy (Roscoe et al., 2017). Nevertheless, learner responses to AWE feedback vary considerably, and concerns remain regarding the accuracy, clarity, and pedagogical usefulness of the feedback provided (Moore & MacArthur, 2016). In addition, traditional AWE systems often require extensive training on large datasets and tend to produce generic or overly detailed feedback, which may confuse learners (Grimes & Warschauer, 2010). Emerging forms of generative AI, such as ChatGPT, differ from earlier AWE systems in that they do not require task-specific training on large corpora and are relatively accessible and cost-effective. These tools have the potential to deliver more adaptive and context-sensitive feedback across a wide range of writing prompts. As such, generative AI represents a promising development in AI-assisted writing feedback, warranting closer examination of its pedagogical role in EFL writing instruction.

### ***Comparison of Human and AI-Generated Feedback***

Previous research has consistently highlighted the importance of teacher feedback in addressing both local and global aspects of writing. Students value feedback that not only corrects grammatical





errors but also provides guidance on content, organization, and overall communicative purpose (Straub, 1997). Feedback that includes explanations, suggestions, and open-ended questions is particularly appreciated, as it reflects teacher engagement and encourages dialogue about writing (Chi, 1999).

Despite its pedagogical value, providing individualized teacher feedback on multiple drafts is highly time-consuming, especially in large classes (Warschauer & Ware, 2006). Research indicates that timely feedback is a crucial factor in promoting learning (Black & Wiliam, 2009), yet institutional constraints often limit teachers' ability to deliver feedback promptly. In contrast, AI-generated feedback can be delivered instantly and iteratively, offering learners immediate opportunities for revision. This contrast has prompted growing interest in examining whether AI-based tools can provide feedback that complements, rather than replaces, human judgment, particularly in contexts where instructional resources are limited.

### Previous Studies

Comparative perspectives on human and automated feedback have further enriched the discussion. Leite and Blanco (2020) compared computer-generated and human-written feedback in an artificial intelligence programming course and found that students receiving human feedback demonstrated stronger conceptual understanding and overall performance. Although this study underscores the pedagogical value of human feedback, its focus on programming rather than language learning, as well as the relatively small sample size, constrains its applicability to EFL writing contexts, particularly at the university level.

More recent studies have begun to explore the role of AI in developing students' feedback literacy. Shafiee Rad, Alipour, and Jafarpour (2023) examined the use of the Wordtune application among upper-intermediate EFL learners and reported significant improvements in writing performance, engagement, and feedback literacy. While the findings suggest that AI tools can enhance learners' ability to interpret and utilize feedback, the results may be influenced by students' positive attitudes toward the application, raising questions about long-term sustainability and generalizability across different cultural contexts.

Research comparing generative AI with human feedback has also gained momentum. Steiss et al. (2024) evaluated the quality of feedback provided by ChatGPT and human raters on secondary school students' essays. Their findings indicated that while human feedback generally outperformed AI in terms of depth and pedagogical value, the overall differences were not substantial, particularly for lower-level writing concerns. However, the study focused on secondary education and did not address higher education contexts, where academic writing demands and learner autonomy differ significantly.

Finally, Yang, Gao, and Shen (2023) conducted a qualitative investigation into students' engagement with Pigai feedback across multiple revision cycles. Their analysis revealed that learners initially prioritized error correction, with more complex feedback gradually gaining attention over time. Despite offering valuable insights into learner - AI interaction patterns, the study did not examine actual language development or learners' cognitive and affective processes during revision, limiting conclusions about learning outcomes.

### Synthesis and Research Gap

Taken together, existing studies demonstrate that AI-generated corrective feedback can enhance revision opportunities, learner engagement, and surface-level writing accuracy. However, several limitations remain evident. Many studies focus on secondary education or non-language disciplines, leaving higher education EFL writing underexplored. While AI tools show promise in addressing lower-level linguistic issues, their effectiveness in supporting higher-order academic writing skills and their interaction with teacher authority and feedback literacy remain insufficiently examined.

These gaps indicate a clear need for a context-sensitive synthesis of AI-generated corrective feedback research that considers Thai university learners. By focusing on the pedagogical integration of AI feedback within Thai higher education, the present review addresses these limitations and contributes a localized perspective to the growing body of literature on AI-assisted EFL writing instruction.

### Discussion





This paper has reviewed and discussed the role of artificial intelligence (AI) corrective feedback in English as a Foreign Language (EFL) writing instruction, with particular reference to Thai university students. Drawing on previous studies, the discussion highlights common writing challenges faced by Thai EFL learners and examines how AI-generated corrective feedback may support writing development through timely, individualized, and consistent responses. While AI feedback cannot replace teacher guidance, it can serve as a valuable supplementary tool in EFL writing classrooms. This paper provides a theoretical foundation for understanding the pedagogical potential of AI corrective feedback in higher education contexts. Future research is encouraged to conduct empirical studies to examine the effectiveness of AI corrective feedback on EFL learners' writing performance in specific instructional settings.

From a theoretical perspective, AI-generated corrective feedback can be understood through the lens of the Noticing Hypothesis, which posits that language learning occurs when learners consciously attend to linguistic forms. The immediacy and explicitness of AI feedback may facilitate noticing by drawing learners' attention to recurring errors in grammar and structure. However, when viewed through the Interaction Hypothesis, AI feedback presents certain limitations, as it lacks the dynamic negotiation of meaning typically found in human interaction. This tension suggests that AI feedback may function most effectively as a supplementary tool rather than a replacement for teacher-mediated interaction. In the Thai educational context, the integration of AI feedback also raises cultural and ethical considerations. Traditional classrooms in Thailand often position teachers as the primary authority, and excessive reliance on AI tools may risk undermining the pedagogical role of instructors. Therefore, careful instructional design is required to ensure that AI serves as a scaffold for learner autonomy while preserving the teacher's central role in guiding academic writing development.

### Knowledge Contribution

This study contributes to the expanding literature on EFL writing by examining the role of AI-generated corrective feedback in the context of Thai higher education. Unlike much of the existing research, which has predominantly focused on Western or East Asian educational settings, this review foregrounds Thai EFL university students, a population that remains underrepresented in AI-assisted writing research. By synthesizing prior findings, the study highlights the potential of AI-based corrective feedback to support writing development, particularly in enhancing revision opportunities and feedback accessibility. The findings also provide a contextualized understanding of how AI technologies may complement traditional pedagogical practices, thereby offering theoretical and pedagogical insights for the integration of AI tools into EFL writing instruction in similar educational contexts.

### Recommendation

First, EFL instructors in Thai higher education are advised to integrate AI-generated corrective feedback as a supplementary pedagogical tool rather than a substitute for teacher feedback. AI-based applications, including automated writing evaluation systems and generative AI tools such as ChatGPT, can be effectively employed during early drafting stages to provide timely, individualized, and iterative feedback on surface-level linguistic features, such as grammar, vocabulary use, and mechanical accuracy. This strategic use of AI may help alleviate teachers' feedback workload while enabling students to engage in more frequent and autonomous revision practices.





Second, explicit instruction on feedback literacy should be incorporated into EFL writing courses. Teachers need to guide students in critically interpreting, evaluating, and applying AI-generated feedback to avoid unreflective or mechanical revisions. Strengthening learners' feedback literacy is particularly crucial in the Thai higher education context, where students may be inclined to treat automated feedback as authoritative. Developing these skills can foster learner autonomy and more meaningful engagement with the writing process.

Third, AI-generated feedback should be systematically combined with teacher and peer feedback through a blended feedback approach. While AI tools are well-suited to addressing lower-level linguistic concerns, human feedback remains indispensable for higher-order aspects of writing, including content development, organization, argumentation, and academic voice. A well-designed blended feedback model can capitalize on the efficiency of AI while preserving the pedagogical value of human judgment, thereby supporting holistic EFL writing development.

## References

- Abas, I. R., & Bakir, A. (2013). Investigating Saudi EFL learners' writing problems: A case study in a Saudi university. *English Language Teaching*, 6(3), 1–10. <https://doi.org/10.5539/elt.v6n3p1>
- Berkenkotter, C., & Huckin, T. N. (1995). *Genre knowledge in disciplinary communication: Cognition/culture/power*. Lawrence Erlbaum Associates.
- Bitchener, J., Young, S., & Cameron, D. (2005). The effect of different types of corrective feedback on ESL student writing. *Journal of Second Language Writing*, 14(3), 191–205. <https://doi.org/10.1016/j.jslw.2005.08.001>
- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7–74. <https://doi.org/10.1080/0969595980050102>
- Black, P., & Wiliam, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, 21(1), 5–31. <https://doi.org/10.1007/s11092-008-9068-5>
- Chi, F. (1999). Teacher commentary on student writing: Developing a dialogue. *Journal of Second Language Writing*, 8(1), 1–21.
- Cohen, A. D. (1998). *Strategies in learning and using a second language*. Longman.
- Creswell, J. W. (2000). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Prentice Hall.
- Ellis, R., Loewen, S., & Erlam, R. (2006). Implicit and explicit corrective feedback and the acquisition of L2 grammar. *Studies in Second Language Acquisition*, 28(2), 339–368. <https://doi.org/10.1017/S0272263106060141>
- Geisler, C. (1994). *Academic literacy and the nature of expertise: Reading, writing, and knowing in academic philosophy*. Lawrence Erlbaum Associates.
- Ghabool, N. (2012). *Investigating writing difficulties among Iranian EFL learners* (Unpublished master's thesis). University of Tabriz.
- Graham, S. (2006). Strategy instruction and the teaching of writing. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 187–207). Guilford Press.
- Grimes, D., & Warschauer, M. (2010). Automated writing evaluation: Past, present, and future. *Journal of Second Language Writing*, 19(1), 22–36. <https://doi.org/10.1016/j.jslw.2009.10.001>
- Hamp-Lyons, L. (2002). The scope of the writing assessment. In L. Hamp-Lyons (Ed.), *Assessing writing* (pp. 1–16). Cambridge University Press.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112. <https://doi.org/10.3102/003465430298487>
- Hedge, T. (1988). *Writing*. Oxford University Press.
- Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. Longman.
- Jaehnig, W. B., & Miller, M. L. (2007). Feedback types and student performance: Positive and negative feedback in educational contexts. *Journal of Educational Psychology*, 99(2), 327–341.
- Kao, S. M., & Reynolds, R. (2017). The effects of explicit instruction on Taiwanese EFL students' writing revision. *TESOL Journal*, 8(1), 135–156. <https://doi.org/10.1002/tesj.292>





- Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119(2), 254–284. <https://doi.org/10.1037/0033-2909.119.2.254>
- Leite, A., & Blanco, S. A. (2020). Effects of human vs. automatic feedback on students' understanding of AI concepts and programming style. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education* (pp. 44–50). Association for Computing Machinery. <https://doi.org/10.1145/3328778.3366921>
- Moore, N. S., & MacArthur, C. A. (2016). Student use of automated essay evaluation feedback. *Journal of Writing Research*, 8(1), 149–177. <https://doi.org/10.17239/jowr-2016.08.01.06>
- Myles, J. (2002). *Second language writing and research: The writing process and error analysis in student texts* (Doctoral dissertation, University of Toronto).
- O'Malley, J. M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge University Press.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Newbury House.
- Pawapatcharandom, P. (2007). *An investigation of Thai students' English language writing difficulties in international programs* (Master's thesis, King Mongkut's University of Technology Thonburi).
- Richards, J. C., & Renandya, W. A. (Eds.). (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge University Press.
- Roscoe, R. D., Allen, L. K., Weston, J. L., Crossley, S. A., & McNamara, D. S. (2017). The writing pal: Natural language processing for automated writing instruction. *Journal of Educational Psychology*, 109(1), 1–17. <https://doi.org/10.1037/edu0000127>
- Rostanti Toba, R., Noor, W. N., & Sanu, L. O. (2019). The current issues of Indonesian EFL students' writing skills: Ability, problem, and reason in writing comparison and contrast essay. *Dinamika Ilmu*, 19(1), 57–73. <https://doi.org/10.21093/di.v19i1.1506>
- Rostanti Toba, R., Noor, W. N., & Sanu, L. O. (2019). Students' writing difficulties and the teaching of writing in EFL classrooms. *Journal of English Education*, 4(2), 103–115.
- Russell, S. J., & Norvig, P. (2020). *Artificial intelligence: A modern approach* (4th ed.). Pearson.
- Shafiee Rad, H., Alipour, R., & Jafarpour, A. (2023). Using artificial intelligence to foster students' writing feedback literacy, engagement, and outcome: A case of Wordtune application. *Interactive Learning Environments*, 32(9), 5020–5040. <https://doi.org/10.1080/10494820.2023.2208170>
- Steiss, J., Tate, T. P., Graham, S., Cruz, J., Hebert, M., Wang, J., Moon, Y., Tseng, W., Warschauer, M., & Olson, C. B. (2024). Comparing the quality of human and ChatGPT feedback on students' writing. *Learning and Instruction*, 91, 101894. <https://doi.org/10.1016/j.learninstruc.2024.101894>
- Straub, R. (1997). Students' reactions to teacher comments: An exploratory study. *Research in the Teaching of English*, 31(1), 91–119.
- Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. Cambridge University Press.
- VanPatten, B. (2003). *From input to output: A teacher's guide to second language acquisition*. McGraw-Hill.
- Walsh, A. (2010). Writing skills: The importance of writing in education. *Journal of Teaching and Learning*, 5(2), 45–54.
- Warschauer, M., & Ware, P. (2006). Automated writing evaluation: Defining the classroom research agenda. *Language Teaching Research*, 10(2), 157–180. <https://doi.org/10.1191/1362168806lr190oa>
- Weigle, S. C. (2002). *Assessing writing*. Cambridge University Press.
- Wenden, A., & Rubin, J. (Eds.). (1987). *Learner strategies in language learning*. Prentice Hall.
- Wilson, J., & Roscoe, R. D. (2020). Automated writing evaluation and feedback: Multiple metrics of efficacy. *Journal of Educational Computing Research*, 58(1), 87–125.





Yang, H., Gao, C., & Shen, H. (2023). Learner interaction with, and response to, AI-programmed automated writing evaluation feedback in EFL writing: An exploratory study. *Education and Information Technologies*, 29, 3837–3858. <https://doi.org/10.1007/s10639-023-11991-3>

