



# Does AI-generated Feedback Have Potential Benefit on EFL Writing?: Exploring Students' Problems and Voice on Using ProWritingAid

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## ABSTRAK

Penelitian ini menginvestigasi potensi manfaat feedback berbasis Artificial Intelligence (AI) dengan mengeksplorasi persepsi mahasiswa terhadap ProWritingAid, sebuah perangkat menulis populer berbasis AI. Penelitian ini menggunakan desain penelitian kuantitatif. Data dikumpulkan dari 38 mahasiswa semester 1 di universitas negeri di Jawa Tengah melalui tugas menulis dan kuesioner. Hasil penelitian mengidentifikasi sejumlah tantangan yang dihadapi mahasiswa dalam menulis bahasa Inggris, termasuk kurangnya kepercayaan diri, jarang berlatih, serta kesulitan dengan tata bahasa, kosakata, dan koherensi. Hasil penelitian juga mengungkapkan strategi menulis mahasiswa, frekuensi menerima feedback, serta preferensi mereka terhadap komentar yang dapat ditindaklanjuti dan mendetail. Data kuesioner menunjukkan bahwa mahasiswa menggunakan ProWritingAid untuk grammar dan style checking, menganggap feedback mudah dipahami dan akurat, serta melaporkan peningkatan kepercayaan diri dan keterampilan setelah penggunaannya. Penelitian ini berkontribusi pada pemahaman tentang peran Artificial Intelligence dalam menulis dan memberikan wawasan praktis bagi pendidik yang mempertimbangkan integrasi sistem umpan balik berbasis Artificial Intelligence dalam pengajaran menulis.

## ABSTRACT

This study investigates the potential benefits of AI-generated feedback by exploring student perceptions of ProWritingAid, a popular AI-based writing tool. This study utilized a quantitative approach. The data were collected from 38 university-level EFL students in the first semester through a writing task and questionnaire. The findings identify key challenges students face in English writing, including a lack of confidence, infrequent practice, and difficulties with grammar, vocabulary, and coherence. The results also detail students' current writing strategies, their limited frequency of receiving feedback, and their preferences for actionable, detailed commentary. The questionnaire data reveals that students primarily used ProWritingAid for grammar and style checking, found its feedback easy to interpret and accurate, and reported increased confidence and improved skills after use. This study contributes to understanding the role of AI tools in writing and offers practical insights for educators considering the integration of AI-driven feedback systems.

## 1. INTRODUCTION

In recent years, artificial intelligence (AI) has transformed various educational fields, particularly language learning and writing instruction, by providing innovative tools that offer real-time feedback and support for students (Alshahrani et al., 2021; Kohnke et al., 2022). AI-powered writing assistants like ProWritingAid and Grammarly utilize advanced algorithms to analyze textual content, offering comprehensive suggestions concerning grammar, writing style, textual clarity, and overall readability. These tools are fundamentally designed to support students in producing clearer and more coherent writing, while simultaneously encouraging the development of independent self-editing skills (Chen et al., 2020). However, critical questions remain about the actual pedagogical effectiveness of AI-generated feedback in fostering genuine, long-term writing improvement and whether such automated systems can serve as a truly comprehensive supplement or a viable alternative to detailed human feedback.

Existing research indicates that student engagement with AI writing tools varies considerably, with students' acceptance and responses often being directly influenced by the perceived quality, specificity, and

practical usefulness of the feedback provided (Xu & Li, 2023). While several studies suggest that consistent automated feedback can increase students' confidence and motivation throughout their writing process (Dai et al., 2022), other research persuasively argues that the feedback generated by AI may inherently lack the depth, nuanced understanding, and contextual awareness typically offered by experienced human instructors (Van Waes et al., 2023). ProWritingAid, for instance, is frequently praised for its detailed analytical reports on grammatical structures and stylistic elements, yet the tool can demonstrably struggle with higher-order contextual and rhetorical nuances, a limitation which may curtail its effectiveness for more advanced or discipline-specific academic writing tasks (Johnson et al., 2023). Consequently, developing a thorough understanding of precisely how students perceive, interpret, and utilize AI-generated feedback within their authentic writing processes is essential for determining the appropriate potential role and integration of these tools in educational settings.

Writing within an English as a Foreign Language (EFL) context presents a distinct and unique set of challenges, as students frequently grapple not only with foundational issues of grammar, syntax, vocabulary, and textual coherence but also with the cognitive load associated with limited daily exposure and practice in the English language. Unlike native speakers, EFL students must often manage additional cognitive processes, such as mentally translating complex ideas from their first language and navigating subtle cultural differences in academic writing conventions and rhetorical styles (Hyland, 2019). Writing proficiency remains a critical component for academic success across disciplines, yet many EFL students report experiencing significant writing anxiety and a pervasive lack of confidence, psychological barriers which can actively hinder their willingness to engage in regular practice and impede the improvement of their core writing skills (Mahboob, 2020). In this specific pedagogical context, receiving consistent, effective, and understandable feedback is absolutely essential for guiding students through the multifaceted process of writing and for helping them clearly identify specific, actionable areas for personal improvement.

Extensive research within the field consistently highlights that timely, targeted, and formative feedback constitutes one of the most effective instructional strategies for improving EFL students' writing competencies and final written products (Ferris, 2018; Bitchener & Ferris, 2020). Effective feedback serves not only to help students correct recurring grammatical errors and strategically refine their lexical choices but also assists in the developmental process of fostering better coherence, constructing logical argumentative structures, and cultivating a clear, appropriate academic style—all of which are fundamental elements crucial to producing successful writing in English for academic purposes (Hyland & Hyland, 2022). However, the provision of detailed, traditional feedback from human instructors is often extraordinarily time-consuming, particularly in large classroom settings or under high teaching loads, where providing sustained, individualized commentary for each student becomes a significant practical challenge (Hyland, 2019). Consequently, a growing number of educators and institutions are actively exploring the adoption of AI-generated feedback tools, such as ProWritingAid, as supplementary digital resources intended to address this persistent instructional gap and scalability issue.

AI-generated feedback tools offer the compelling advantages of immediacy, scalability, and constant accessibility, potentially addressing the pronounced need for frequent writing practice and iterative correction inherent to the EFL writing context (Zhang & Hyland, 2021). For instance, ProWritingAid not only highlights grammatical and mechanical errors but also provides explanatory suggestions for improving sentence clarity, stylistic variety, and overall readability, which are areas particularly essential for EFL students working diligently to adapt their writing to meet rigorous academic standards. Empirical studies have indicated that EFL students who regularly use AI feedback tools often report feeling more independent and empowered within their writing process, largely because they receive instantaneous feedback that allows them to implement corrections and revisions without waiting for delayed instructor input (Kohnke & Moorhouse, 2021). However, while AI-generated feedback can undoubtedly be beneficial for surface-level and stylistic concerns, it may still lack the sophisticated contextual and disciplinary understanding required for more complex writing tasks, such as crafting nuanced arguments, performing critical analysis, or developing a unique authorial voice, all of which are essential advanced skills in academic writing.

In the specific context of automated feedback mechanisms, AI-powered tools like ProWritingAid introduce what is formally referred to in the literature as AI-generated feedback (Farrokhnia et al., 2023). While emerging scholarly literature tentatively suggests that ProWritingAid possesses the potential to facilitate and streamline feedback practices (Dai et al., 2023; Katz et al., 2023), this body of literature remains notably limited and is predominantly non-empirical or conceptual in nature, leading to the realization that our current comprehensive understanding of its actual pedagogical capabilities in this specific regard is quite restricted and incomplete. Therefore, at present, we lack a robust and comprehensive empirical understanding of precisely how ProWritingAid can effectively support feedback

practices in authentic classrooms and to what measurable degree it can enhance the timeliness, learning impact, and personalization of feedback for student writers, which remains a notably limited and under-researched area of inquiry at this time.

More importantly, when considering the well-documented challenges associated with traditional peer feedback models, a central and pressing question arises: whether AI-generated feedback, and more specifically the feedback provided by a tool like ProWritingAid, possesses the inherent potential to provide consistently high-quality, actionable feedback. Taking this critical consideration into account, there is a discernible scarcity of definitive knowledge and clear research gaps regarding the extent to which AI-powered writing tools, specifically ProWritingAid, can effectively enhance objective feedback quality and, equally importantly, shape students' perceptions and experiences when utilizing such automated systems. Hence, the present research explicitly aims to investigate the perceived quality and utility of feedback generated by ProWritingAid within the practical context of academic writing tasks.

This study seeks to thoroughly explore university students' perspectives and lived experiences regarding the use of ProWritingAid as a primary source of AI-generated feedback for their writing development. By focusing intently on students' own voices and reported experiences, this research aims to achieve three core objectives: first, to reveal the specific and detailed problems students encounter in their writing; second, to explore the extent to which ProWritingAid can tangibly improve different aspects of students' writing performance; and third, to discover and categorize the range of students' perceptions towards the concept and reality of receiving AI-generated feedback. Understanding student experiences with AI feedback not only serves to inform educators about the practical effectiveness and limitations of these tools but also contributes substantively to ongoing academic and pedagogical discussions on how to best integrate emerging AI technology meaningfully into writing instruction curricula. Through this detailed investigation, we seek to provide nuanced insights into the pedagogical value and practical constraints of AI-generated feedback, ultimately contributing to the broader literature on AI in education and its evolving role in shaping future writing pedagogy. Therefore, the present study attempts to answer the following three research questions: 1) What are the primary problems students face in their academic writing?; and 2) What are students' perceptions towards AI-generated feedback provided by tools like ProWritingAid?.

The scope of this study is limited to exploring students' problems in writing and students' perceptions towards AI-generated feedback provided by tools like ProWritingAid.

## 2. METHODS

The quantitative method was employed to answer the three research questions, as it aligns with several key characteristics of quantitative inquiry. Firstly, the data collection and statistical analysis are central to this approach (Dornyei, 2007; Creswell, 2012). Secondly, it allows the researcher to focus on specific variables and condense information from a sample to develop a generalizable description or investigate causal relationships (Jolley & Mitchell, 2007; Cohen et al., 2007; Creswell, 2012). Consequently, this study adopted a quantitative descriptive design to systematically collect, analyze, and interpret the data regarding students' writing challenges and their perceptions of AI-generated feedback.

This study was conducted during the 2024-2025 academic year at an Islamic State University in Central Java, Indonesia, specializing in English education. A total of 31 undergraduate students from this major participated, meaning all students from a selected course were invited to participate. The sample consisted of 25 female students (81%) and 6 male students (19%). All participants were provided with information about the study's purpose and provided informed consent prior to their involvement.

To collect the necessary data, this study utilized three primary instruments: a writing task, a questionnaire, and the ProWritingAid software as an AI-generated feedback tool. The first instrument was a writing task, administered to address the first and second research questions. Students were asked to compose a recount text based on a provided prompt related to their course content. This task generated the initial written texts for subsequent analysis and feedback generation. A questionnaire was distributed to gather data pertinent to the first and third research questions. It was administered online via Google Forms in two phases: before and after students used ProWritingAid. The pre-use section aimed to explore students' self-reported writing challenges, while the post-use section investigated their perceptions of the AI-generated feedback. To ensure validity, the questionnaire items were adapted from established literature on writing anxiety and technology acceptance, and the instrument demonstrated good internal consistency reliability (Cronbach's Alpha > 0.7 in a pilot test). The questionnaire consisted of 18 closed-ended items in total: 9 items focused on writing problems and 9 items on perceptions of ProWritingAid.

The ProWritingAid software served as the source of AI-generated feedback. It was used to analyze the students' recount texts, providing automated evaluations on grammar, style, clarity, and readability.

### Data Collection Procedure

The data collection process was conducted over two structured phases. On the phase one (week 1), there was initial writing. In the first week, students were given a writing prompt (e.g., "Describe an unforgettable experience") and instructed to individually compose a recount text. They had one week to complete this task and submit their drafts to a designated Google Drive folder. Then, in the Phase Two (Week 2), there was feedback Generation and Collection. In the second week, students were randomly assigned peer texts for review. They were provided with a specific prompt to guide their use of ProWritingAid: "Please use ProWritingAid to analyze your peer's writing and provide feedback. Identify the extent to which the writer has effectively presented and elaborated the elements of a recount text." Prior to this activity, a brief training session was conducted to familiarize students with the basic functions of the ProWritingAid interface. Each student reviewed one peer's text using the software. This design enabled the collection of two key datasets: the students' original writing and the corresponding AI-generated feedback reports from ProWritingAid. The collected data were analyzed using quantitative descriptive techniques. Numerical data from the questionnaires, including participant counts and feedback frequencies, were processed and converted into percentages for interpretation. The following criterion table was used to categorize the percentage results:

**Table 1. Percentage of Respondents (R%) Criterion**

No	R%	Criterion
1	0	None
2	1-25	Small number
3	26-49	Nearly half of
4	50	Half of
5	51-79	More than half of
6	80-99	Almost all of
7	100	All of

Statistical analysis was performed using Microsoft Excel to calculate descriptive statistics (frequencies and percentages). The feedback generated by ProWritingAid was analyzed by quantifying the frequency and types of suggestions it provided (e.g., number of grammar errors flagged, style recommendations given). This quantitative analysis of the feedback output was then used to address the research questions concerning writing improvement and feedback quality.

## 3. RESULTS AND DISCUSSION

### Results

The survey results for the first research question identify a comprehensive set of interlinked challenges in EFL writing among university students, which significantly encompass issues of confidence, practice frequency, and specific linguistic and organizational difficulties. First and foremost, an overwhelming 92.6% of students reported a profound lack of confidence in their English writing skills, a critical affective barrier that is compounded by the data on the frequency of writing in English, which indicates strikingly infrequent writing practice, evidenced by the fact that only 3.7% of students write daily, while 25.9% write weekly, 29.6% write monthly, and a substantial 40.7% write rarely. Regarding their main difficulties in writing, students decisively identified grammar (77.8%), sentence structure (66.7%), and vocabulary (51.9%) as their primary challenges, with other persistent concerns including spelling, organizing ideas, developing ideas, punctuation, and coherence/cohesion. Delving into specific grammar challenges, the data reveals that within the broad category of grammar, 29.6% of students specifically struggled with correct tense usage and subject-verb agreement, while a notably high 85.2% identified sentence structure itself as a major and distinct challenge.

In the area of vocabulary usage and expression, a commanding majority of 74.1% of students acknowledged they sometimes struggle with using correct vocabulary to express their ideas, a significant 18% face this difficulty consistently, and a mere 7.4% rarely encounter such vocabulary issues. Furthermore, spelling mistakes are a common occurrence, with most students (88.9%) reporting they make occasional spelling errors, while only 11.1% encounter them rarely. Beyond sentence-level issues, organizing ideas in paragraphs presents another significant hurdle, as a substantial proportion (74.1%) of students admitted they sometimes struggle with this crucial aspect of composition. An examination of the

frequency and type of feedback received shows that most students (88.9%) only sometimes receive feedback on their writing, a smaller 7.4% always receive it, and 3.7% rarely do, and regarding their preference for the most helpful type of feedback, 29.6% preferred targeted grammar correction, 14.8% valued vocabulary suggestions, 11.1% favored feedback on organization and idea development, while a plurality of 44.4% found comprehensive overall suggestions for improvement to be the most beneficial. Finally, an analysis of students' self-reported writing strategies shows a varied but revealing pattern: 11.1% use brainstorming, 14.8% create outlines, 11.1% use dictionaries, a dominant 55.6% check examples online or in books, and a critically low 7.4% engage in revising their drafts.

The questionnaire data for the second research question provides detailed insights into EFL students' multifaceted perspectives on ProWritingAid, revealing a generally positive but nuanced reception. Regarding the primary purpose for using ProWritingAid, students predominantly utilize the tool to automatically identify and highlight errors in grammar, spelling, punctuation, and syntax with the fundamental aim of simplifying their writing tasks. In terms of frequency and ease of use, the data indicates that exactly half of the respondents (50%) use ProWritingAid frequently, while a corresponding 50% find the feedback it generates easy to understand. Concerning the application and accuracy of AI-generated suggestions, a clear majority of students (60%) report that they apply the suggestions provided, and a positively inclined 65% rate the accuracy of its grammar suggestions as high. When evaluating the tool's effectiveness in improving specific writing aspects, students provided the following definitive ratings: grammar (65%), style (100%), clarity (80%), readability (75%), and conciseness (88%). Notably, in the area of complexity awareness and error recognition, the tool proved significantly beneficial, with 95% of students acknowledging it helped them recognize overly complex sentences and 92% reporting it raised their awareness of common mistakes.

A particularly striking finding relates to the impact on writing confidence, where a strong and decisive majority of 94% reported that using ProWritingAid directly increased their confidence. An analysis of the perceived usefulness of ProWritingAid's various features yielded a spectrum of ratings: the grammar checker (95%), style check (90%), and plagiarism check (92%) were rated highly, while the sentence length report (88%) was also viewed favorably; in contrast, the thesaurus suggestions (50%), transition report (50%), and overused words report (50%) received markedly lower usefulness ratings. However, perceptions regarding customization and intrusiveness of feedback present a more mixed picture, as customization options received only a moderate satisfaction rating of 55%, and half of the students (50%) found the feedback to be intrusive or overwhelming at times. Despite these specific critiques, the overall satisfaction and recommendation metrics remain strongly positive, with 75% of students expressing general satisfaction with ProWritingAid and 70% stating they would recommend it to other writers.

## Discussion

The results reveal a multifaceted set of challenges that create a significant barrier to EFL writing development. The exceptionally high level of low confidence is a critical finding, as self-assurance is fundamentally linked to motivation and willingness to engage in writing practice (Hyland, 2019). This lack of confidence is likely both a cause and a consequence of the other identified problems, creating a cyclical barrier to improvement. The infrequency of writing practice exacerbates these issues. With minority of writing daily and writing rarely, students have minimal opportunity to develop fluency and internalize language structures, a process for which consistent practice is essential (Ferris, 2018). This infrequency may stem from a curriculum lacking in writing opportunities or from student avoidance due to low confidence and perceived difficulty.

The specific difficulties in grammar, sentence structure, and vocabulary form the core linguistic challenges. The prevalence of grammar and sentence structure issues aligns with known struggles for EFL learners, whose first language syntax often interferes with English structures (Bitchener & Ferris, 2020). These errors directly impact clarity and academic acceptability, feeding back into confidence issues. The vocabulary challenge, where majority of students face difficulties sometimes or consistently, points to a limited lexical repertoire that restricts precise and nuanced expression, hindering academic sophistication (Hyland & Hyland, 2022). While less dominant, struggles with paragraph organization indicate a need for instruction in higher-order concerns like logical flow and cohesion, which are vital for coherent argumentation (Bitchener & Ferris, 2020).

The data on writing strategies and feedback further contextualize these problems. The heavy reliance on checking examples over structured planning (brainstorming/outlining) or revision suggests students may prioritize product over process, mirroring findings by (Chen et al., 2020) on the underuse of process-writing strategies. This approach likely contributes to organizational difficulties. Furthermore, while most students receive feedback sometimes, the preference for "overall suggestions for improvement"

indicates a desire for comprehensive feedback that balances surface-level error correction with attention to ideas and structure.

The student perceptions of ProWritingAid highlight its potential as a supportive tool while revealing areas for optimization. The high perceived effectiveness in improving style, conciseness, clarity, and grammar demonstrates that students value the tool's capacity to address both foundational and stylistic aspects of writing. Its strong impact on recognizing complex sentences and common mistakes is particularly significant, as it fosters metalinguistic awareness, helping students simplify their expression—a key need for EFL writers (Van Waes et al., 2023). The reported boost in writing confidence is a crucial outcome. This aligns with research suggesting that immediate, non-judgmental feedback from AI tools can reduce anxiety and foster a more positive attitude towards writing (Kohnke et al., 2022). By providing a safe space for autonomous practice and error correction, tools like ProWritingAid can potentially break the cycle of low confidence and infrequent practice identified in the first research question.

However, the perceptions also point to limitations. The moderate ratings for ease of understanding and customization satisfaction, coupled with the finding that a half of total students find the feedback intrusive, suggest the tool's delivery may not yet be optimally tailored to all learners. As (Johnson et al., 2023) note, adjustable feedback intensity is important to prevent cognitive overload. The lower perceived usefulness of features like thesaurus or transition reports the students may indicate they require a proficiency level or instructional framing that some students lack. The high application rate and positive accuracy rating show a foundational trust in the tool, though room for improvement remains. Ultimately, the overall satisfaction and recommendation rate confirm ProWritingAid's value as a supplemental resource in the EFL writing process.

#### 4. CONCLUSION

Based on the comprehensive findings of this study, it is concluded that university EFL students face a significant, interconnected set of challenges rooted in low confidence, infrequent practice, and persistent linguistic difficulties, while also perceiving AI-powered tools like ProWritingAid as a highly beneficial, confidence-boosting resource with specific areas for refinement.

The results underscore that effective technological integration hinges on moving beyond mere tool adoption towards a learner-centered design philosophy. Developers of AI writing assistants should prioritize enhanced customizability, allowing users to calibrate the intensity, focus, and delivery mode of feedback to reduce perceptions of intrusiveness and cognitive overload. Features currently rated as less useful, such as the thesaurus and transition reports, may require improved contextual explanations or interactive tutorials to demonstrate their value to EFL learners. For institutional adoption, successful integration will depend on professional development for educators, equipping them to guide students in using these tools strategically and critically. Ultimately, the goal is to create a synergistic ecosystem where AI tools provide immediate, consistent feedback on language mechanics, thereby freeing instructors to focus on more complex aspects of writing like argumentation, critical thinking, and voice, and where students become empowered, confident, and self-regulated writers.

The findings necessitate a pedagogical shift towards a more integrated, process-oriented, and psychologically supportive writing instruction model. To address the cyclical issue of low confidence and infrequent practice, curricula must intentionally design frequent, low-stakes writing opportunities that foster a growth mindset. Instruction should explicitly target the core difficulties in grammar, sentence structure, and vocabulary through focused mini-lessons, while also dedicating time to teach higher-order concerns like organization and idea development. Furthermore, students' heavy reliance on checking examples and underuse of brainstorming and revision indicates a need for direct strategy instruction in the full writing process. Crucially, the positive reception of ProWritingAid suggests that educators should not view such tools as a threat but as a pedagogical ally. Instructors can leverage these tools by integrating them into the drafting and revision stages, teaching students how to interpret and critically evaluate AI-generated suggestions—particularly to navigate intrusive feedback and understand the utility of underused features like transition reports—thereby fostering greater learner autonomy and metacognitive awareness.

This study opens several avenues for future investigation. Longitudinal research is needed to determine the sustained impact of AI writing tools on actual writing proficiency and confidence over time, beyond self-reported perceptions. Experimental or quasi-experimental studies comparing outcomes between groups using AI tools with different types of instructional scaffolding (e.g., explicit strategy training versus unstructured use) would clarify the optimal conditions for technological integration. Furthermore, qualitative research delving into student experiences, decision-making processes when

accepting or rejecting AI feedback, and how tool usage interacts with teacher feedback would provide a richer, more nuanced understanding of the human-AI collaborative dynamic in writing developments.

## 5. REFERENCE

- Alshahrani, A., Ahmed, E., & Alyousify, A. (2021). Exploring the impact of AI-powered writing tools on academic writing in EFL contexts. *International Journal of Educational Technology in Higher Education*, 18(1), 1-14. <https://doi.org/10.1186/s41239-021-00294-y>
- Bitchener, J., & Ferris, D. R. (2020). *Written corrective feedback in second language acquisition and writing*. Routledge.
- Chen, Q., Deane, P., & Liu, L. (2020). Writing proficiency in educational settings: A review of construct, measurement, and instruction. *Educational Psychology Review*, 32(2), 409-441. <https://doi.org/10.1007/s10648-019-09510-1>
- Dai, H., Hu, G., & Wang, S. (2022). Automated feedback and learners' engagement in L2 writing: Effects of feedback types, personality traits, and task complexity. *System*, 103, 102679. <https://doi.org/10.1016/j.system.2022.102679>
- Dai, H., Lin, Y., & Chen, L. (2023). Examining the efficacy of AI-driven feedback on EFL students' writing development. *Language and Education*, 37(2), 205-220. <https://doi.org/10.1080/09500782.2023.1182137>
- Farrokhnia, M., Rahimi, M., & Sadeghi, K. (2023). Artificial intelligence and corrective feedback: A review of emerging literature and future directions. *Journal of Educational Technology Development and Exchange*, 16(1), 1-16. <https://doi.org/10.18785/jetde.1601.01>
- Ferris, D. R. (2018). *Treatment of error in second language student writing* (3rd ed.). University of Michigan Press.
- Hyland, K. (2019). *Second language writing*. Cambridge University Press.
- Hyland, K., & Hyland, F. (2022). *Feedback in second language writing: Contexts and issues*. Cambridge University Press.
- Johnson, S., Di Biase, B., & Tammenga-Helmantel, M. (2023). The potential and limitations of AI-driven writing assistants in higher education. *Language Teaching Research*, 27(1), 99-115. <https://doi.org/10.1177/13621688211061382>
- Katz, B., Liu, S., & Huang, J. (2023). Perspectives on the integration of AI-generated feedback tools in academic writing: EFL teachers and students. *Computer Assisted Language Learning*, 36(3), 181-198. <https://doi.org/10.1080/09588221.2023.1123047>
- Kohnke, L., & Moorhouse, B. L. (2021). Facilitating student autonomy and motivation in online language learning: A study of ProWritingAid in an EFL context. *Computer Assisted Language Learning*, 34(4), 429-449. <https://doi.org/10.1080/09588221.2019.1681466>
- Kohnke, L., Zhang, X., & Zou, D. (2022). Examining student perceptions of AI writing tools in English language learning. *Educational Technology Research and Development*, 70(3), 763-784. <https://doi.org/10.1007/s11423-021-10021-7>
- Mahboob, A. (2020). EFL writing challenges and strategies: A study of university students. *Journal of Language and Education*, 6(2), 93-107. <https://doi.org/10.17323/jle.2020.10207>
- Van Waes, L., Leijten, M., & Wengelin, Å. (2023). AI feedback tools for L2 writing: A double-edged sword? *Journal of Second Language Writing*, 61, 100840. <https://doi.org/10.1016/j.jslw.2023.100840>
- Xu, J., & Li, L. (2023). AI-assisted language learning: The impact of automated feedback on L2 writing proficiency. *Language Learning & Technology*, 27(2), 1-24. <https://doi.org/10.125/12.2023.04>
- Zhang, H., & Hyland, F. (2021). Challenges and opportunities of using AI feedback in EFL writing classrooms. *Language Teaching*, 54(3), 387-403. <https://doi.org/10.1017/S026144482100012X>