



UNDERGRADUATE STUDENTS' PERCEPTIONS REGARDING THE IMMEDIATE, AUTOMATED FEEDBACK BY *WRITE & IMPROVE* ON LEARNERS' MOTIVATION AND SELF-EFFICACY IN WRITING TASKS

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Abstract. This study investigates learners' opinions regarding the immediate, automated feedback provided by the *Write & Improve* platform, with a particular focus on its influence on motivation and self-efficacy in second language writing tasks. Employing a mixed-methods approach, the research gathered quantitative data through Likert-scale questionnaires and qualitative insights from open-ended responses submitted by 19 undergraduate participants. The findings indicate that most learners perceived the automated feedback positively. The instant and iterative nature of the system enhanced their confidence, encouraged revision, and fostered greater independence in the writing process. Learners reported increased motivation to write, as the visual progress indicators and real-time suggestions made the task more engaging and goal-oriented. Additionally, the opportunity to revise multiple times without judgment supported the development of self-efficacy by promoting mastery experiences. However, some participants noted limitations in the system's ability to explain errors in depth, reinforcing the importance of combining automated feedback with teacher guidance. Overall, the study concludes that *Write & Improve* can effectively support both the cognitive and affective dimensions of second language writing, particularly when integrated into a blended learning environment.

Keywords: *Automated Feedback, Write & Improve, Motivation, Self-efficacy, Second Language Writing, AWE*

INTRODUCTION

Writing is one of the most demanding skills in second language (L2) learning because it requires mastery of grammar, vocabulary, and discourse while involving complex cognitive and affective processes (Hyland, 2003). Many learner face writing anxiety, limited vocabulary, and structural difficulties that reduce their motivation and self-confidence (Chandrasegaran, 2001). Motivation influences persistence and effort

(Dörnyei, 1998), while self-efficacy belief in one's ability to perform a task successfully determines willingness to engage with writing (Bandura, 1997). Addressing these affective factors is crucial for improving L2 writing outcomes.

Feedback plays a central role in bridging learners' current and desired performance levels (Ferris, 2006). Teacher feedback is often personalized but delayed due to workload constraints (Hyland & Hyland, 2006). Peer feedback encourages collaboration but may lack accuracy (Baker et al., 2009). Automated Writing Evaluation tools provide immediate, consistent feedback and allow iterative revisions, fostering learner autonomy and self-regulation (Li, Link, & Hegelheimer, 2015; Ranalli & Link, 2016).

One such tool, *Write & Improve*, developed by Cambridge English, offers instant error detection, CEFR-based progress indicators, and nonjudgmental feedback, potentially reducing writing anxiety and supporting independent learning. However, while prior studies highlight AWE's technical accuracy and effectiveness, limited research examines students' perceptions and how such feedback influences their motivation and self-efficacy, especially in Indonesian EFL contexts.

The present study seeks to address three key issues: how learners perceive the automated feedback provided by *Write & Improve*, how this feedback influences their motivation to complete writing tasks, and how the revision process based on such feedback affects their self-efficacy. In line with these problems, the objectives of the study are to explore learners' perceptions and experiences with *Write & Improve*, to examine the influence of immediate automated feedback on their motivation, and to analyze how such feedback impacts their writing self-efficacy.

This research contributes to Automated Writing Evaluation literature by focusing on learners' affective responses rather than solely on writing performance. It offers insights for educators on integrating AWE tools like *Write & Improve* into blended learning environments to support both cognitive and emotional aspects of L2 writing. Findings may also inform developers in refining feedback features to better address learners' motivational and self-efficacy needs.

LITERATURE REVIEW

Research on second language writing highlights the central role of feedback in shaping learners' writing development and affective engagement. Feedback bridges learners' current performance and desired proficiency, helping them identify errors and refine ideas (Ferris, 2006). Traditional teacher feedback is valued for its depth and accuracy, yet it is often delayed due to workload constraints (Hyland & Hyland, 2006). Peer feedback fosters collaboration and critical thinking but may suffer from inconsistency and limited linguistic knowledge (Baker et al., 2009). The emergence of Automated Writing Evaluation (AWE) tools addresses these challenges by providing immediate, consistent

feedback that supports iterative revision and learner autonomy (Li, Link, & Hegelheimer, 2015; Ranalli & Link, 2016).

L2 Writing

Writing in a second language constitutes a complex and cognitively demanding process that integrates idea generation, organization, and accurate linguistic expression (Hyland, n.d.). It is widely regarded as one of the most challenging skills for L2 learners, as it requires simultaneous engagement in higher-order thinking and mastery of lower-level linguistic competencies. Learners' performance is frequently hindered by writing anxiety, low self-confidence, and limited exposure to authentic writing tasks (Richards & Renandya, n.d.).

Feedback

Feedback is fundamental to writing development as it helps learners identify strengths, address weaknesses, and engage in revision. Three primary forms of feedback are commonly used: teacher, peer, and automated.

- **Teacher feedback** is regarded as the most authoritative and focuses on grammar, content organization, and coherence, though it is often delayed due to workload constraints (Ferris et al., 2011; Lee, 2008).
- **Peer feedback** fosters collaboration and critical thinking but may suffer from inconsistent quality and students' reluctance to critique peers (Baker et al., 2009; Hyland, 2006).
- **Automated feedback**, made possible through natural language processing, provides immediate and objective evaluations of grammar, vocabulary, and coherence, supporting iterative revisions and learner autonomy (Li, Link, & Hegelheimer, 2015; Ranalli & Link, 2016).

Automated Feedback and Write & Improve

Write & Improve, developed by Cambridge English, exemplifies AWE technology by offering instant feedback on grammar, vocabulary, and coherence. The platform also estimates CEFR levels, enabling learners to track progress across multiple revisions. Its objective and nonjudgmental nature potentially reduces writing anxiety and promotes self-paced learning (Ranalli & Link, 2016). Studies show that AWE tools enhance grammatical accuracy and revision behavior (Wei et al., 2023; Wilson et al., 2021), yet research exploring learners' emotional responses—motivation and self-efficacy—remains limited, particularly in Indonesian EFL contexts.

Motivation and Self-Efficacy

Motivation determines the degree of effort and persistence learners devote to writing tasks (Dörnyei, 1998). Highly motivated students are more likely to engage actively in revisions and pursue improvement. Self-efficacy, defined as learners' belief in their ability to perform specific tasks (Bandura, 1997), shapes how they respond to challenges; higher self-efficacy correlates with greater resilience and willingness to write. Feedback strongly influences both constructs: supportive and immediate feedback can boost motivation and confidence, while unclear or overly critical feedback may undermine them (Pajares, 2003).

Prior research on AWE has predominantly focused on technical accuracy and performance outcomes rather than affective responses. For example, Wilson et al. (2021) found that MI Write improved feedback efficiency but posed challenges for low-performing students. Wei et al. (2023) demonstrated that Grammarly enhanced grammar accuracy and writing self-efficacy among Chinese EFL learners. In Indonesia, Pariyanto & Tungka (2024) reported that WhiteSmoke significantly improved grammar and vocabulary quality and was perceived as motivating. However, few studies specifically examine Write & Improve in the Indonesian context, particularly regarding how learners perceive its feedback and how it influences their motivation and self-efficacy in writing tasks.

METHOD

This study employed a mixed-methods approach with an explanatory sequential design to investigate learners' perceptions of automated feedback from Write & Improve. Quantitative data were first collected using a five-item Likert-scale questionnaire measuring motivation, confidence, clarity of feedback, anxiety reduction, and writing autonomy, followed by qualitative data from open-ended questions to provide deeper insights into participants' experiences (Creswell & Plano Clark, 2018). The participants consisted of nineteen English Literature students from Universitas 17 Agustus 1945 Surabaya, selected through purposive sampling based on their prior experience with Write & Improve and completion of at least five writing and revision cycles. Data collection involved students performing five writing tasks on the platform, revising iteratively based on the automated feedback, and submitting screenshots of their progress along with questionnaire responses. Quantitative data were analyzed descriptively to identify patterns in learners' perceptions, while qualitative data underwent thematic analysis to explore recurring themes related to motivation and self-efficacy, allowing for comprehensive integration of both data types in addressing the research questions.

RESULT AND DISCUSSION

Learners' Opinions Regarding Automated Feedback

The quantitative findings indicate that learners generally held positive opinions toward the automated feedback provided by Write & Improve. Responses to two key questionnaire items confidence in writing and understanding of mistakes both recorded a high mean score of 4.45 on a 5-point Likert scale. Nearly 95% of participants selected "agree" or "strongly agree" for these items, reflecting strong approval of the tool's clarity and usefulness. Specifically, nine students (47.4%) rated their confidence at the highest level, while another nine (47.4%) provided a rating of four, with only one participant (5.3%) indicating low confidence. Similar distributions were observed for the perception of understanding mistakes, where 42.1% strongly agreed and 42.1% agreed that the

automated feedback clarified their errors, though a small minority (15.8%) expressed neutral or negative views. These results suggest that Write & Improve successfully enhanced learners' awareness of language errors and contributed to their sense of competence during writing tasks.

Qualitative responses further elaborate on these positive perceptions. Students frequently described the feedback as "clear," "direct," and "helpful," particularly for grammar and vocabulary issues. Several participants highlighted improved awareness of sentence structure and common mistakes; for example, one learner noted that "the feedback really helps me to improve my writing; it shows which part of my writing has a grammar error." Another emphasized the immediacy of feedback as motivating, stating that "it directly shows the mistake or the changes I need to make." These insights reflect learners' appreciation for the actionable nature of the feedback and its role in fostering independent revision habits. However, certain limitations were also acknowledged. Some students observed that suggestions could be repetitive or lacked detailed explanation, particularly for complex sentences or stylistic issues. One participant remarked, "sometimes the suggestions were unclear or repeated, even when I thought the sentence was already correct," while another pointed out that "teacher feedback gives more detailed explanation," highlighting the comparative lack of depth in automated responses.

From a theoretical perspective, these findings align with Bandura's Social Cognitive Theory (1997), which posits that self-efficacy is strengthened through mastery experiences. The clarity and immediacy of Write & Improve feedback enabled learners to make rapid corrections, reinforcing their belief in their ability to improve writing independently. This iterative process mirrors Bandura's view that repeated successful revisions enhance self-confidence and persistence. Additionally, the results resonate with Dörnyei's L2 Motivation Theory (1998), as the automated feedback system provided tangible indicators of progress such as CEFR level gains and visual progress charts that fostered a sense of achievement and encouraged continued engagement. While the automated nature of the tool limited its capacity for nuanced explanation and affective support, its efficiency and objectivity were highly valued by learners, suggesting its potential as a complementary feedback mechanism in blended learning contexts.

Effect of Automated Feedback on Learners' Motivation

Quantitative data indicated that the automated feedback from Write & Improve positively influenced learners' motivation to engage in writing tasks. Responses to the item "I enjoy writing more when I receive instant feedback" produced a high mean score of 4.30, with 42.1% of participants selecting "strongly agree" and another 47.4% selecting "agree." This pattern suggests that the majority of students found the immediate feedback motivating and enjoyable. A slightly lower but still positive response was recorded for the item "I feel less anxious when revising my writing with this app," which yielded a mean score of 3.65. While 57.9% of participants indicated reduced anxiety (selecting 4 or 5), 26.3% remained neutral, and 15.8% expressed mild disagreement, showing that the feedback reduced anxiety for many but not all learners.

Qualitative findings reinforce these quantitative trends. Many participants reported that the instant feedback and visible progress indicators encouraged them to revise more actively and view writing as a less daunting task. Comments such as “this tool motivates me to keep practicing and improving my writing” and “I can track my progress and see improvement over time” illustrate how the feedback fostered a sense of achievement and incremental growth. Several learners highlighted the motivational impact of the CEFR progress charts, which functioned as benchmarks for their improvement and inspired repeated submissions. Nonetheless, a few participants mentioned that motivation fluctuated when progress was slower than expected; for instance, one learner stated, “even if I don’t get a higher level right away, I feel motivated to improve,” suggesting that while the tool encourages persistence, it may also introduce minor frustration for some users. Interpreted through Dörnyei’s L2 Motivation Theory (1998), these findings demonstrate how the automated feedback system supports motivational dynamics by providing clear goals (e.g., CEFR levels), immediate evaluative information, and tangible indicators of improvement. These elements align with Dörnyei’s motivational components of “goal-setting” and “task enjoyment,” both crucial for sustained engagement in L2 learning. Furthermore, the system’s iterative revision process resonates with Social Cognitive Theory (Bandura, 1997), as repeated exposure to feedback and visible progress strengthens learners’ belief in their ability to improve a key driver of sustained motivation. Nevertheless, the limited emotional depth of automated responses, compared to teacher encouragement, suggests that while *Write & Improve* effectively enhances motivation for task completion, it should be supplemented by human feedback to address affective support needs more holistically.

Effect of Feedback Revision Process on Learners’ Self-Efficacy

The quantitative data revealed that automated feedback and iterative revision processes on *Write & Improve* contributed positively to learners’ writing self-efficacy. The item “I feel more confident about my writing after using *Write & Improve*” yielded a high mean score of 4.45, with nearly 95% of participants selecting “agree” or “strongly agree.” Similarly, the statement “I feel more independent in improving my writing using this app” produced a mean score of 4.10, indicating that students perceived the tool as fostering greater autonomy in managing their writing improvement. These findings suggest that learners not only felt more capable of producing accurate writing but also more confident in identifying and addressing their own errors without constant reliance on teacher input. Qualitative responses supported these statistical results, highlighting self-perceived growth in confidence and autonomy. Several students described feeling “more aware of common mistakes” and “able to fix grammar without waiting for teacher feedback,” illustrating an increased sense of control over the writing process. Others noted that the ability to revise multiple times “without judgment” made them more willing to

experiment with ideas and take risks in their writing. However, a minority of participants acknowledged lingering doubts, especially when encountering complex feedback that lacked detailed explanation; one participant stated, “sometimes I still need teacher feedback for more advanced writing problems,” emphasizing the limitations of automated feedback for higher-level issues such as style and coherence.

These findings align with Bandura’s Social Cognitive Theory (1997), which identifies mastery experiences as a primary source of self-efficacy. The iterative cycle of submitting, receiving feedback, and revising fostered repeated success experiences that strengthened learners’ belief in their ability to improve. Moreover, the objective and immediate nature of automated feedback minimized anxiety and promoted self-directed learning, resonating with Pajares’ (2003) argument that clear, constructive feedback enhances confidence while vague or overly critical feedback undermines it. Together, the results suggest that Write & Improve not only supports learners’ cognitive development but also plays a vital role in shaping their affective readiness to engage with future writing tasks.

Integration and Theoretical Interpretation

The integration of quantitative and qualitative findings demonstrates a consistent pattern: learners perceived the automated feedback from Write & Improve as beneficial for both cognitive and affective aspects of second language writing. Quantitatively, high mean scores across measures of confidence (4.45), motivation (4.30), and autonomy (4.10) indicate widespread approval of the tool’s clarity and immediacy. Qualitative data enrich this picture by illustrating how students internalized these benefits, often describing a heightened sense of control over revisions, reduced fear of errors, and increased willingness to engage in iterative writing cycles. Although limitations were acknowledged particularly regarding the lack of contextual depth and emotional nuance compared to teacher feedback these did not overshadow the overall positive perceptions. The findings align closely with Second Language Acquisition (SLA) principles, which emphasize the role of timely feedback and meaningful input in facilitating language development (Krashen, 1982; Hyland & Hyland, 2006). Automated feedback served as a form of immediate corrective input that encouraged interaction with the language and supported continuous refinement of linguistic accuracy. Through the lens of Bandura’s Social Cognitive Theory (1997), the study highlights how iterative revisions and visible progress fostered mastery experiences, thereby enhancing learners’ writing self-efficacy. The ability to track improvements across multiple submissions provided tangible evidence of competence, a key driver of self-confidence in performance tasks. Concurrently, the results resonate with Dörnyei’s L2 Motivation Theory (1998), as visual CEFR indicators and goal-oriented revision cycles sustained learners’ intrinsic and extrinsic motivation by offering clear benchmarks for success and reinforcing a sense of achievement.

Synthesizing these theoretical perspectives, the study demonstrates that automated feedback systems like Write & Improve are not merely corrective tools but motivational

catalysts that bridge technical skill development and affective readiness. However, the limitations identified particularly in addressing higher-order concerns such as coherence, content development, and emotional support suggest that AWE tools function most effectively as complementary resources within blended learning contexts. Combining automated and teacher feedback can leverage the strengths of both approaches: scalability, immediacy, and consistency from AWE, alongside the depth, empathy, and contextual understanding of human feedback.

CONCLUSION

This study examined undergraduate EFL students' perceptions of the immediate, automated feedback provided by *Write & Improve* and its impact on their motivation and self-efficacy in writing tasks. Findings indicate that learners generally perceived the feedback positively, appreciating its clarity, immediacy, and objectivity in highlighting grammatical and lexical errors. Quantitative data revealed consistently high ratings for increased confidence and enjoyment in writing, while qualitative responses underscored learners' appreciation for iterative revision opportunities and visual indicators of progress. These features collectively fostered greater autonomy and reduced writing anxiety, although some participants noted the lack of detailed explanations and affective support compared to teacher feedback.

Viewed through the theoretical lens of Second Language Acquisition, Social Cognitive Theory, and L2 Motivation Theory, these results illustrate that automated feedback supports both cognitive and affective dimensions of L2 writing. Iterative feedback cycles provided mastery experiences that enhanced self-efficacy, while CEFR-based progress indicators sustained motivation by offering clear benchmarks for improvement. Nevertheless, the findings also suggest that while *Write & Improve* is effective in addressing lower-level linguistic issues, its limitations in providing contextualized feedback on content and organization highlight the need for complementary human feedback in comprehensive writing instruction.

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