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EDITORIAL

Artificial Intelligence Revolutionising Writing Assessments

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ABSTRACT - Artificial intelligence (AI) is revolutionising writing assessments, which may involve essays and reports and offer self-paced and custom-made learning experiences. The integration of AI into writing assessments provides both advantages and challenges. Some benefits are that it enhances efficiency and speed, objectivity and consistency, offers comprehensive feedback and personalised learning support, and increases scalability. On the other hand, some challenges with AI integration with written assessments are its scarcity of evaluation nuances, tendencies toward overreliance, limited scope for subjective interpretation, concerns about ethical and academic integrity, and accessibility issues. With particular attention to overreliance, the matter occurs when users start accepting incorrect AI outputs. Overreliance on AI may lead to problems and errors that eventually make users lose trust in AI systems. Some types of overreliance on AI are identified, and a brief explanation of how they can be mitigated is provided. It is becoming imperative to embrace the impacts of artificial intelligence while addressing the challenges thoughtfully so that the power of AI is steered to enhance learning experiences and create a more inclusive and dynamic educational ecosystem.

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1.0 INTRODUCTION

Technological advancement, such as Artificial Intelligence (AI), undeniably has rapidly changed the education landscape, where embracing AI technology is highly encouraged among educators and learners. The transition, fuelled by the evolution of the digital-native generation's learning preferences, digital fluency, and inclination towards social media, is driving a shift towards an increase in informal and self-paced learning environments among young learners. Social media platforms such as TikTok, Facebook, Instagram, and YouTube offer unique features and opportunities for young learners to optimise their learning experience. Social media platforms' dynamic and interactive nature enables learners to acquire knowledge, share information quickly, collaborate on projects, and receive real-time feedback. This notion promotes informal and self-paced learning, allowing learners to explore topics independently, especially those that resonate with their interests and learning styles.

Artificial intelligence, on the other hand, aids learners in learning smarter by offering a personalised learning experience. It provides additional resources and instant explanations of complex topics, which aid understanding and boost learning efficiency. The stunning debut of AI chatbots like ChatGPT, Gemini, and Microsoft Copilot offers academic support for learners in various tasks such as researching, brainstorming, analysing, coding, and writing. These valuable tools play a critical role in the learning process and the learner's well-being, especially with the recent appearance of AI companions, revolutionising how learners interact with technology in their daily lives.

Microsoft Copilot recently promoted an easier way to use generative artificial intelligence assistance as it is now available in multiple instant messaging applications such as Telegram and WhatsApp. Learners can quickly seek assistance from Copilot by chatting, just like interacting with their instant messaging application's contact list. Mustafa Suleyman (2024), the CEO of Microsoft AI, said, "Copilot will be there for you, in your corner, by your side, and always strongly aligned with your interests. It understands the context of your life while safeguarding your privacy, data, and security, remembering the most helpful details in any situation. It gives you access to a universe of knowledge, simplifying and decluttering the daily barrage of information and offering support and encouragement when you want it".

While integrating AI and informal learning promises numerous benefits, challenges are inevitable, especially concerning learners' well-being. The constant development of artificial intelligence and the information overload offered by this integration can increase learners' stress and anxiety. Some may feel pressured to keep up with recent technology updates and information sharing, and fear of missing out (FOMO) may be triggered, negatively affecting learners' mental health. Therefore, continuous support from educational institutions and governments is necessary to ensure learners can integrate AI effectively into their learning. Overall, incorporating artificial intelligence into education and everyday activities presents various opportunities, advantages, and challenges.

2.0 AI'S INESCAPABLE IMPACT ON WRITING ASSESSMENTS

In today's DNA, there is almost no escape from artificial intelligence (AI). Its impact is expanding exponentially in various fields, particularly in education. The educational landscape has seen a revolutionary shift towards enhanced personalised learning,

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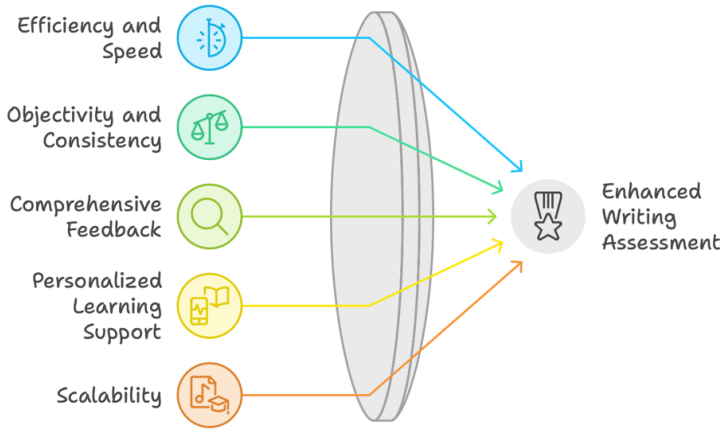
streamlining administrative tasks and innovative engagement methods. In academic writing, much of the intricate work, such as grammar correction, citation management, and content analysis, has been taken over by AI tools. Campbell (2019) asserted that academic writing is one of the cruxes in developing English language learners, which compels wide-ranging assessments regarding writing organisation, coherence, grammar, and vocabulary. Proficient writing skills empower learners to communicate their ideas effectively, articulate thoughts clearly, and achieve academic excellence across various professional domains (Song & Song, 2023). Hence, while there are substantial benefits to integrating AI into academic writing assessments for the English language, such as reports and essays, it also presents challenges that necessitate careful consideration.

2.1 The Positive Spectrum of AI in Writing Assessment

Foremost, AI writing tools enhance the writing process. From generating ideas to final editing, such as grammar and style corrections, AI tools are favoured among writers because they have been empirically proven to improve or enhance writing skills effectively. AI's precedence is various but not exclusive, with noticeable plusses regarding efficiency and speed, objectivity and consistency, comprehensive feedback, personalised learning support, and scalability. Figure 1 outlines the positive impacts or the identified benefits of the tool.

Figure 1

AI impact to enhance writing assessments



One of the apparent advantages is AI's efficiency and speed in handling tasks related to this skill. AI-driven tools can instantly assess essays, reports, and other forms of writing. Jiang et al. (2023) found that large language models (LLMs) like GPT-4 and GPT-3.5 can evaluate writing accuracy in T-units and sentence structures comparable to human raters' performance. The AI models reduce the time needed to assess large writing volumes and provide speedier feedback than manual grading. According to Bannò et al. (2024), GPT-4 has proven its high precision in writing assessments compared to human evaluations, making it a promising tool for automating writing assessments in language education. Educators can provide on-time feedback swiftly, sometimes effortlessly, reducing the lapse between assignment submission and evaluation. As a result, students can receive near-immediate input to assist them in continuing to write, reflect, and improve in a manner that is faster than the conventional human-given feedback. In this situation, teachers and students also gain more time for other tasks and feel less burdened because of AI tools' efficiency and speed advantages in handling writing processes.

AI tools have also proven objective and consistent in assessing writing because they eliminate subjective biases that human evaluators might introduce. Human assessors may vary their grading due to subjective factors like mood, personal biases, or fatigue, whereas AI systems are programmed to apply the same criteria consistently across all evaluations. AI systems remain neutral and evaluate the text based on predetermined rubrics to ensure consistent uniformity in grading, which reduces the risk of variability introduced by human checking. AI tools maintain this consistency for grammar checks, vocabulary usage, and structural analysis tasks across various submissions (Jiang et al., 2023).

Another prominent AI feature is its comprehensive feedback. Automated written feedback (AWF) brought by Automated Writing Evaluation (AWE) is an example of an AI writing tool that offers detailed and thorough feedback through systems that use machine learning (ML) and natural language processing (NLP) to assess various elements of writing (Fleckenstein et al., 2023; Shi & Aryadoust, 2024). These AI writing tools provide detailed and thorough feedback, identifying grammatical errors and sentence structure issues while offering appropriate feedback for improvement. Advanced AI tools can also assess an essay or report's cohesion, clarity, and logic to pinpoint weaknesses and suggest ways to rectify them.

Inadvertently, this feature directs to another AI's calibre, i.e., the ability to provide real-time personalised learning support. AI systems can adapt to students' writing abilities, offering tailored feedback and exercises based on individual learning needs (Laak & Aru, 2024). For example, AI-driven platforms can detect learners' learning styles, whether visual, auditory, or kinaesthetic – how students learn best and customise the content accordingly. This personalisation feature fits with the adaptive learning approach, where the learning process is continuously revised based on the writer's performance, which simultaneously advocates high engagement and steers to improved learning outcomes.

One thing is sure: AI has the upper hand in simultaneously assessing large volumes of writing. AI's expandability is particularly useful for large classrooms and national or international standardised tests. Its scalability makes it a practical solution for assessing writing at a large scale, reducing the burden on educators. AI tools like CogBooks, Cerego, and McGraw Hill's ALEKS are integrated into writing-intensive courses to provide personalised feedback and scaffold learning. These systems grade assignments automatically and offer formative feedback, helping learners improve their writing iteratively. Undoubtedly, as we speak, AI's usefulness in writing assessments is multiplying as more and more studies are looking into ways to solve human deficiencies and increase qualities in assessing writing.

2.2 The Hidden Pitfalls: How AI Can Undermine Writing Assessment

The fact is everything has two sides to the coin. With the extensive coverage of the benefits of integrating AI in writing assessments, one should stop and question the nature and purpose of adopting AI writing tools for these assessments. Writing is a complex and dynamic process influenced by individual, social, and cultural factors. It is essential to consider writers' and readers' diverse needs and perspectives. Although AI is discussed as having benefits for accurately assessing writing, some criticisms are noted, including its lack of evaluative nuances, tendencies towards overreliance, limited scope for subjective interpretation, concerns about ethical and academic integrity, and accessibility issues.

One of AI's negative impacts on writing assessments is its lack of nuance in evaluation. AI tools often struggle to assess creativity, tone, and context in writing. Writing involves a human element, such as creativity, humour, or subtle arguments, which AI may misinterpret or undervalue. These tools might disproportionately reward technical correctness (such as grammar and syntax) over creativity, originality, or the nuanced use of language.

There are also issues with over-reliance on AI, particularly in feedback. Passi and Vorvoreanu (2022) defined the matter when "users accept incorrect AI recommendations, i.e., making errors of commission" (p. 2) because users cannot determine whether or how much they should trust the AI. It was identified that many users struggle to determine appropriate levels of trust because they are not fully aware of what the AI system can do, how well it performs, and how it works. This lack can cause users to over-rely on AI due to automation bias, confirmation bias, ordering effects, and overestimating explanations (Passi & Vorvoreanu, 2022) (Table 1).

Table 1

Mechanisms of overreliance on AI adapted from (Passi & Vorvoreanu, 2022)

Mechanisms	How and Why Users Over-Rely on AI
Automation Bias	It is the tendency to prefer recommendations from automated systems, disregarding information from non-automated sources.
Confirmation Bias	It occurs when users favour information that aligns with prior assumptions, beliefs, and values. It further reinforces the beliefs users already have about the input from AI and the AI system itself.
Ordering Effects	The effects occur based on whether users see the AI system succeed or fail during early interactions. The timing of AI errors significantly affects user reliance.
Overestimating Explanations	Explanations help users better understand AI recommendations, but extensive or too detailed explanations often lead users to develop overreliance on AI.

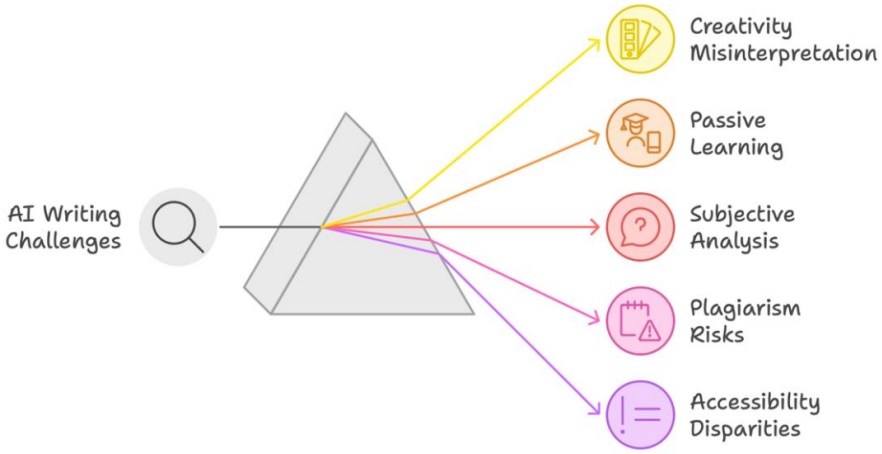
Writers may become too dependent on AI-generated corrections and suggestions, potentially leading to passive learning. If writers overly rely on AI tools, they may be unable to develop high-level writing skills such as summarising, synthesising, and self-editing, which are crucial for mastering the English language. In other words, the notion could decrease the writer's ability to think creatively and critically and cause the writer to be unable to self-assess. Remarkably, many studies concur that overreliance on AI leads to worse performance than the user or AI working alone (Buçinca et al., 2021; Jacobs et al., 2021; Passi & Vorvoreanu, 2022; Zhang et al., 2020).

Moreover, one thing that is often overlooked is the limited scope of AI when subjective interpretation of a piece of writing is required. Some essays and reports require subjective analysis that gives away multiple valid interpretations. In this sense, AI lacks human subjectivity to evaluate deeper meanings and make inferences underlaid by cultural elements or personal experiences that might be the focal points of the writing pieces. The inescapable impact also leads to ethical and academic integrity concerns when using AI to improve writing or language skills. AI tools that can assist students in improving their writing can sometimes go beyond guidance and become an avenue for plagiarism. With AI-generated writing tools, such as language models like ChatGPT, there is a risk that students might submit AI-written essays or sections of reports, raising concerns over originality and authenticity.

In addition, AI plagiarism changer platforms, similar to tools like "word spinners," "paraphrasing tools," or "text spinners," also raise alarms about academic integrity. These AI-powered plagiarism changers shortcut paraphrasing by transforming existing content using machine learning algorithms while maintaining coherence. The concern is primarily when plagiarism changers are used to avoid detection without proper citation to avoid plagiarism detection software such as Turnitin (Lee, 2023).

Figure 2

The pitfalls of AI in writing assessments



Finally, the accessibility of AI is essential when discussing equality and quality education. Not all students or institutions have the same level of access to the Internet, digital devices, or advanced AI writing tools, which can potentially create disparities in learning opportunities and assessment outcomes. Students in under-resourced areas may not benefit from AI's advantages in writing assessments, widening the gap in language proficiency. Figure 2 depicts the pitfalls of AI in writing assessments.

3.0 CRAFTING CONFIDENT WRITERS: ESSENTIAL RECOMMENDATIONS FOR LANGUAGE INSTRUCTORS

Now that we have unpacked the opposites let us focus on how humans and AI can potentially promote equity, diversity, and inclusion (Hartwell & Aull, 2023) in academic writing assessment. To create confident writers in today's AI-driven world, educators or assessors are encouraged to blend AI with traditional feedback, promote critical thinking and self-editing, emphasise creativity and originality, utilise AI for data-driven insight, integrate ethical discussions on AI use, and offer support beyond AI feedback.

Blend AI With Traditional Feedback

Despite AI's wide range of benefits, particularly in providing detailed and targeted feedback, it is still most effective when used alongside human guidance (Fleckenstein et al., 2023; Shi & Aryadoust, 2024). While AI tools can speed up the evaluation process, teachers should balance them with traditional, human feedback, especially for more subjective aspects of writing, such as creativity, argumentation, and style. Combining AI with conventional feedback can offer a more comprehensive assessment of written work.

Foster Critical Thinking and Self-Editing

Indirectly, it promotes critical thinking that prompts writers to self-edit their writing. The notion will place AI tools for writing as supplementary resources rather than supports. Hartwell and Aull (2023) recommended well-designed assignments that break down into several steps, such as those that use focused, explicit criteria with reasonable scope and offer specific parameters, scaffolding longer writing assignments into multiple drafts and requiring reflective writing either throughout the process or at the end, using it to assess their writing competency. Gompel and Smith (2024) proposed having students write in Microsoft Word or Google Docs, where these single web documents enable students to save multiple drafts for review, which will aid in clarifying and verifying the origins of the students' work if there are queries on the work's originality. Educators or assessors are also advised to teach their students to evaluate AI-generated feedback and apply corrections thoughtfully and critically. Students should additionally be trained to reflect on their work independently before relying on AI assistance.

Highlight Creativity and Originality

Creativity and originality should always be the focus of writing. With this mindset, educators should encourage and facilitate the development of writers' voices, creativity, and ingenuity while AI focuses on technical aspects. Unique thinking and personal perspectives should be appreciated and acknowledged through rewards or praise. In doing so, the use of AI may become undervalued or be regarded as a last resort.

Make Use of AI Data-driven Insight

AI tools should generate data-driven insights into common writing mistakes. The data gathered should serve as a needs analysis. The tools can then guide lesson planning by identifying issues and impediments hindering students' writing development and ways to improve lessons to enhance language and writing skills acquisition.

Incorporate Ethical Discussions on AI Use

Educators are reminded to be well-informed about the current and evolving trends in academic integrity involving AI. The ethical implications of AI use should be openly discussed to create awareness and a sense of responsibility among writers regarding the detectable and unforeseen adverse effects of integrating AI in writing. The discussion should engage students in understanding the

boundaries between receiving AI assistance and maintaining academic integrity, highlighting the importance of originality, proper citations, and plagiarism. Figure 3 illustrates the enhancement of writing assessment with AI.

Providing Support Beyond AI Feedback

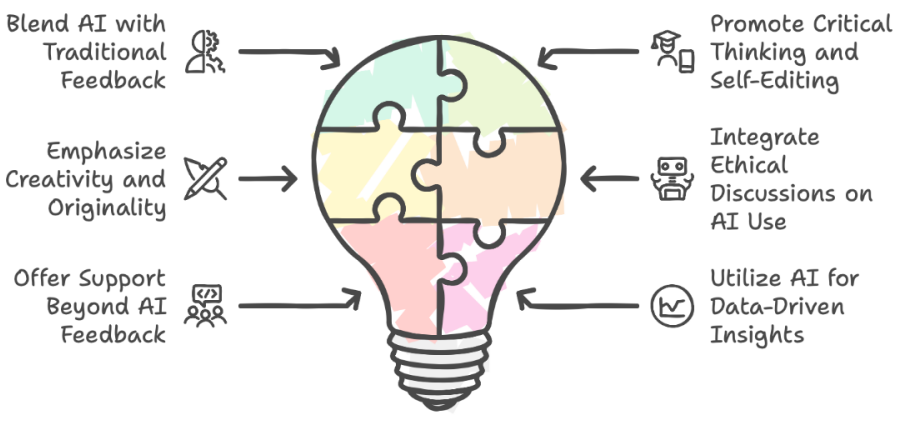
Overreliance on AI-driven platforms and tools can be moderated when educators or assessors provide support beyond what AI feedback offers. However, this is complicated because appropriate reliance is a moving target. After all, it is hard to operationalise and depends on the context and purpose of the application (Passi & Vorvoreanu, 2022). Hence, Table 2 presents techniques educators or assessors might consider mitigating students' overreliance on AI during initial interaction and regular use. **Table 2**

Techniques to mitigate students' overreliances on AI (taken from Passi & Vorvoreanu, 2022)

Time	Mitigation Technique	Brief Explanation
During initial interactions	Effectively onboard users	Provide both correct and incorrect predictions to help users develop appropriate first impressions. Customise tutorials for people with low/high automation bias, low/high AI literacy, and low/high task familiarity.
	Be transparent with users	Communicate (a) basic model properties (e.g., known strengths and limitations, overall design objective) and (b) intended use cases (e.g., cases envisioned during development, benchmarked model evaluations).
	Provide personalised adjustments for users	Evaluate user susceptibility (from tutorials and early results) to adjust automation accordingly.
During regular use	Employ cognitive forcing functions	Increase users' cognitive motivation to engage with AI recommendations, using techniques such as confidence and uncertainty information, accuracy scores, and cost of errors.
	Provide real-time feedback	Real-time feedback on human performance leads to improvement (e.g., alerting the user when they have accepted a risky recommendation). Give people ways to triangulate their decisions while working with AI models. Help people reflect on their decision-making process.
	Provide effective explanations	Build informative, not just convincing, explanations. Explanations sensitive to model performance help users develop appropriate trust at the model level. Explanations sensitive to prediction uncertainty help users develop appropriate trust at the recommendation level.
	Alter the speed of Interaction	Alter the AI system's response time and provide users ways to reflect on the task and estimate their own and the AI's decision-making process while they are waiting for the AI recommendation.
	Give users choice	Give AI recommendations only upon request.

Figure 3

Recommendations for balancing AI and human feedback in writing assessment



Furthermore, alternative resources and skill-targeted workshops on writing skills that AI tools may not cover, such as constructing persuasive arguments, developing narrative techniques, or writing for a particular context or audience, can help improve aspects of overreliance.

4.0 CONCLUSION

AI's role in academic writing assessments for the English language presents many opportunities and challenges. While it promotes efficiency, objectivity, and personalised learning, it poses potential pitfalls such as overreliance, lack of creativity, and ethical concerns. Therefore, it is more beneficial to embrace technology rather than worrying about the inevitable impacts of AI, as this allows us to make its effects more predictable and implement reversible countermeasures. Educators can foster enhanced language proficiency and writing skills in their students by using a balanced approach, such as integrating AI and conventional teaching methods.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

Nor Yazi Khamis (Conceptualization, Visualisation; Writing - review & editing)

Nurkarimah Yusof (Conceptualization, Literature search, Data curation; Formal analysis, Writing - original draft)

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