



# Integrity in the age of AI: navigating authorship, accountability and ethical publishing

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- A – Research concept and design
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- D – Writing the article
- E – Critical revision of the article
- F – Final approval of article

## ABSTRACT

The rapid emergence of generative artificial intelligence (AI) is reshaping the landscape of academic writing and scholarly publishing, offering both opportunities and ethical challenges. This editorial reflects on the growing implications of AI-assisted authorship, particularly regarding authorship, accountability, and research integrity. While AI tools can improve clarity and accessibility, their misuse raises concerns about the erosion of critical thinking and the reliability of scientific results.

A key issue highlighted in this discussion is the increasing incidence of false or unverifiable references generated through AI-assisted processes. These practices threaten the credibility of scholarly communication and increase the burden on editors and reviewers. In response, this editorial emphasizes the importance of responsible AI use, transparency in authorship, and rigorous source verification.

Furthermore, the article outlines the journal's commitment to maintaining high standards of quality and ethical publishing. This includes strengthening editorial policies, promoting integrity in manuscript preparation, and encouraging accountability among authors. The editorial also calls on the academic community to adopt responsible practices in the use of emerging technologies.

In line with international publishing standards, this editorial is designed to provide critical perspectives, articulate editorial responsibilities, and offer a forward-looking stance on ethical scientific communication. Ultimately, maintaining trust and credibility in the AI era requires a collective commitment to transparency, rigor, and integrity at every stage of the publication process.

**Keywords:** academic integrity, authorship accountability, ethical publishing, fabricated references, generative artificial intelligence, scholarly communication.

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## INTRODUCTION

In recent years, the rapid advancement of generative artificial intelligence (AI) has transformed the landscape of academic writing and scholarly publishing. Tools capable of producing fluent, structured, and authoritative text have presented both unprecedented opportunities and complex ethical challenges. While this technology can support language refinement and increase accessibility in scholarly communication, it also raises critical concerns about authorship, originality, and accountability (Azaria et al., 2024; BaHammam, 2025; Stokel-Walker & Van Noorden, 2023). The traditional boundaries between human intellectual contributions and machine-assisted production are increasingly blurred, requiring a careful reconsideration of established norms in scholarly work.

At the same time, the growing pressure to publish, coupled with increasing competition in academia, has increased the risk of ethical compromise. Issues such as shallow writing, inadequate citation practices, and the erosion of critical engagement with sources have become more visible (COPE Council, 2019; Dwivedi et al., 2023). Because scholarly communication plays a central role in shaping public knowledge and understanding, maintaining trust and credibility in academic publishing is more important than ever.

In the context of physical education and sport science, the integration of generative AI presents opportunities and risks that are particularly relevant to interdisciplinary research practices (Pareek et al., 2024; Zhou et al., 2025). Studies in this field often combine physiological data, performance analysis, and educational frameworks, requiring a high level of accuracy and methodological rigor. The presence of AI-generated content (especially unverified references) can therefore undermine not only scientific validity but also applied practices in training, coaching, and education. Given the rapid evolution of AI technology, establishing adaptable ethical guidelines is crucial to ensuring the responsible and effective integration of AI into sports science research.

This editorial explicitly positions *Physical Education and Sports: Studies and Research (PESSR)* as a journal that prioritizes ethical integrity over technological convenience. We emphasize that the use of generative AI must remain transparent, accountable, and strictly controlled to maintain the credibility of scientific communication. Implementing clear transparency and accountability measures, such as detailed documentation of AI processes and decision-making, can guide researchers in adhering to ethical standards and foster trust in published research.

### **Generative AI and Responsible Writing**

Generative AI offers significant potential to improve academic writing, particularly in enhancing clarity, grammar, and structure. For many researchers, especially non-native English speakers, these tools can facilitate more effective communication of scientific ideas (Dwivedi et al., 2023; van Dis et al., 2023). However, AI should remain a supporting tool, not a substitute for intellectual responsibility. Authors are ultimately responsible for the accuracy, originality, and integrity of their work, regardless of the tools used during the writing process.

Responsible use of AI requires transparency and critical scrutiny. Authors should ensure that all AI-generated or AI-assisted content is carefully reviewed, verified, and aligned with scientific standards. Uncritical reliance on AI-generated text risks

inaccuracies, oversimplifications, or even misleading interpretations (Stokel-Walker & Van Noorden, 2023). Therefore, it is important to emphasize that AI cannot replace the core principles of academic writing: critical thinking, evidence-based reasoning, and ethical responsibility (United Nations Educational, 2021).

Despite these risks, generative AI also offers significant opportunities, such as improving linguistic clarity, supporting non-native English-speaking writers, and increasing efficiency in the early stages of drafting. If used responsibly, AI can complement, not replace, human intellectual contributions.

### **The Growing Problem of False References**

One of the most concerning issues arising from the use of generative AI is the increasing prevalence of false or unverifiable references. AI systems, while capable of generating seemingly plausible citations, can generate references that do not exist or inaccurately represent existing sources. This poses a serious threat to the integrity of scholarly work, as references serve as the basis for validating claims and positioning research within the broader scholarly discourse.

Several researchers have raised serious concerns about the increasing prevalence of false and inaccurate references generated by large language models in academic writing (Stokel-Walker & Van Noorden, 2023; van Dis et al., 2023). Emerging empirical evidence suggests that this is not a minor issue, but a systemic limitation of current AI systems. A recent review of AI-assisted academic writing reported that false citations can occur at rates as high as 60%, often involving non-existent articles, authors, or journals (Rajaratnam et al., 2026).

More detailed experimental studies further illustrate the severity of this problem. For example, Bhattacharyya et al. (2023) found that 47% of AI-generated references were completely fabricated, while only 7% were completely accurate. Similarly, Walters & Wilder (2023) reported that 55% of citations generated by GPT-3.5 were fabricated, with an additional 43% of the remaining references containing substantial errors. In another study, Cheng et al. (2025) observed that 23.4% of references were completely fabricated and 16.9% were partially fabricated, indicating that nearly half of the generated citations were unreliable.

This problem extends beyond fabrication to broader issues of accuracy and verifiability. Sawamura et al. (2024) found that 40.5% of citations were fictitious, while only 18.9% could be accurately matched to valid identifiers such as DOIs or PMIDs. Similarly, Chelli et al. (2024) reported hallucination rates ranging from 28.6% to as high as 91.4%, depending on the model used. These findings collectively highlight that, although AI-generated references often appear plausible and professionally formatted, their reliability remains highly inconsistent.

Illustrative case studies reveal that fake references are not just a theoretical problem but have permeated formal publication systems. Spinellis (2025) documented a case where a fictitious article was falsely attributed to him, exposing systemic weaknesses in editorial safeguards against AI-generated content. Similarly, Moore (2025) examined an article published in the reputable *Journal of Academic Ethics* and found that the majority of its references were fake, ultimately leading to its retraction. These cases underscore the urgent need for stronger verification mechanisms in scholarly publishing.

The inclusion of fake references undermines the credibility of both individual manuscripts and journals as a whole. It also reflects a deeper problem: a shift from

rigorous engagement with the literature to a more superficial and automated approach to scholarship. Editors and reviewers now face the additional burden of verifying citation authenticity, underscoring the need for greater vigilance at all stages of the publication process.

Taken together, this growing body of evidence underscores a crucial concern for scholarly publishing: AI systems can mimic academic referencing structures without guaranteeing factual authenticity. Without rigorous verification, integrating such results into scientific manuscripts risks undermining the credibility, traceability, and integrity of the academic record.

### **Our Commitment to Quality and Integrity**

PESSR implements a quality control system that operates at every stage of the publishing process. The Editor-in-Chief first reviews each submitted manuscript to assess its suitability for the field of focus and its initial quality. Manuscripts that meet the initial criteria are then further processed through a double-anonymized peer review mechanism by at least two reviewers with expertise in the relevant field. During this process, the reviewers assess the manuscript's rigor, scientific validity, novelty, methodological rigor, and contribution to scientific advancement.

To address emerging challenges, PESSR continues to strengthen its editorial and peer review processes. This includes promoting transparency in the use of AI tools, encouraging rigorous citation practices, and ensuring that all submissions are evaluated with a strong emphasis on scientific merit and ethical compliance (COPE Council, 2019; Elsevier, 2023). In line with evolving publishing standards, PESSR requires authors to disclose the use of AI tools and to ensure full accountability for the content of their manuscripts.

Additionally, as part of its internal quality control measures, PESSR implements an AI authoring assessment to monitor the extent of machine-assisted text generation. The recommended threshold for AI-assisted content (e.g., not exceeding 30%) is not a rigid universal standard, but rather an internal guideline to ensure that human intellectual contributions remain dominant. This estimate is qualitatively evaluated through editorial assessment and, where applicable, supported by AI detection tools. Future policy improvements will be aligned with evolving international standards and empirical evidence.

This policy is not intended to stifle innovation, but rather to protect the originality, transparency, and integrity of scholarly communication, in line with emerging recommendations on the responsible use of AI in academic publishing (Nature, 2023; United Nations Educational, 2021). Through these measures, PESSR aims to maintain the trust of readers, authors, and the broader academic community while responsibly adapting to technological advances.

### **Practical Recommendations for Responsible AI Use**

To support the ethical integration of AI, several practical steps can be implemented. Authors should verify all AI-generated references using reliable databases such as Scopus, PubMed, or CrossRef to ensure authenticity. Editors and reviewers need to remain vigilant for inconsistencies that might indicate fraudulent citations. Journals are also encouraged to establish clear AI disclosure policies to increase transparency. Furthermore, adopting a simple checklist-based approach,

such as verifying references, confirming originality, and declaring the use of AI, can help ensure accountability and maintain the integrity of scientific communication.

For reviewers, this evolving landscape demands increased attention to inconsistencies in citations and writing patterns that might indicate misuse of AI. For authors, ethical responsibility includes not only disclosure but also active verification of all AI-assisted results.

### **Our Call to Authors and Our Commitment to Ethical Publishing**

The Committee on Publication Ethics (COPE) states that minimum requirements for authorship include a substantial contribution to the work and accountability for its content and presentation (COPE Council, 2019). PESSR calls on all authors to uphold the principles of honesty, accountability, and scientific rigor in their work. The use of generative AI must be guided by ethical considerations, with full responsibility remaining with the authors. PESSR strongly encourages authors to verify all references, ensure the originality of their manuscripts, and avoid any practices that might compromise the integrity of the research.

At the same time, PESSR reaffirms its commitment as a journal to fostering a culture of ethical publishing. PESSR will continue to provide clear guidelines, support responsible research practices, and take appropriate action in cases of ethical violations. By working with authors, reviewers, and the academic community, we can address the challenges posed by emerging technologies while maintaining the core values underlying scientific communication.

## **CONCLUSIONS**

The integration of generative artificial intelligence into academic writing represents a pivotal moment in the evolution of scholarly communication. While this technology offers significant opportunities to increase productivity and accessibility, it also presents significant ethical challenges that cannot be ignored. Issues surrounding authorship, accountability, and reference reliability underscore the need for renewed vigilance in maintaining the integrity of the scientific record.

As the boundaries between human- and machine-assisted writing continue to blur, the responsibility for upholding ethical standards remains with the academic community. Editors, reviewers, and authors must work together to ensure that innovation does not compromise credibility and trustworthiness. The future of scholarly publishing depends not only on technological advancements but also on our shared commitment to transparency, rigor, and integrity.

In this context, PESSR reaffirms that ethical publishing is not simply a set of guidelines, but a fundamental principle underlying the advancement of knowledge. By implementing responsible practices and fostering a culture of integrity, the academic community can address the challenges of the AI era while preserving the values that define scientific excellence.

## **AI DISCLOSURE STATEMENT**

The author acknowledges using DeepL Translator and Grammarly as language aids to improve clarity, coherence, and academic expression. All content, interpretation, and final decisions remain the sole responsibility of the author.

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