



THE FUNCTIONAL ROLE OF ARTIFICIAL INTELLIGENCE IN WORKING OUT THE CRISIS IN THE REVIEWER POOL

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Becoming reviewers is absolutely a volunteer process to ensure the credibility and reliability of any scientific/academic paper and requires them to spend their spare time to review and improve the quality of the submitted papers. Editors try to do their best to find qualified reviewers, who can provide timely and high quality feedback within the scheduled review period. An increase in the number of educational research journals calls for much more reviewers and boosts their workloads with frequent invitations. For example, Scopus indexes 1593 journals for education and social sciences in 2024 while Web of Science has 760 journals in Social Science Citation Index (SSCI) for education and educational research and 86 journals in Emerging Sources Citation Index (ESCI) for education and scientific disciplines. Similarly, Turkish Index (TR Dizin), Education Resources Information Center (ERIC), H.W. Wilson, Australian Education Index and British Education Index cover dozens of journals. Even though the number of journals has been increasing year by year, the reviewer pool has slightly been extended. In other words, nearly all of them use the same reviewer pool. Therefore, receiving too many invitations for reviewing the submitted papers creates a high pressure on the potential reviewers, who are well-qualified in reflecting their in-depth knowledge of the subject matter and methods (Bauchner & Rivara, 2024). Unfortunately, most of them immediately decline from the invitations without any reason and suggesting other potential reviewers. Thereby, the review rounds take much more time than the expected one. Although all potential authors consider the journals' metrics (e.g., submission to first decision, submission to first post-review decision, acceptance to publication) to select the fastest ones, few of them are volunteer to act as reviewers for other submitted papers. Given my editorial experiences, two of nine invited reviewers accept the invitation for the review process. This makes the current peer review system imbalance and highlights the importance of sustainability in the publication process (BaHammam, 2025; Bauchner & Rivara, 2024). In fact, I have declined several reviewing invitations from different journals I am not affiliated. Therefore, I have a great empathy with the reviewers, who decline the invitation for the review process. I could not imagine how to effectively manage our working hours if we, as reviewers, accepted all invitations. In fact, the journals offer some perks and incentives (e.g., credits for future publication, free access to the publisher's journals, databases and books, and certification for reviewing) for the reviewers to draw their attention and foster them to accept the invitations. BaHammam (2025) states that monetary compensation and publication credits are more attractive for the potential reviewers than free access to the publisher's journals and certification for reviewing. However, he emphasizes that small and national journals could not meet such financial rewards. Therefore, scientific/academic publishing needs alternative tools, which are time-efficient, economic and effective (BaHammam, 2025; Bauchner & Rivara, 2024; Biswas, 2024; Yorukoglu, 2024).

Given the role of artificial intelligences (AI) (e.g., ChatGPT, Gemini, DeepSeek) in editing the manuscripts and suggesting alternative modelling, the scientific community has been

inquiring whether it could overcome the crisis in the reviewer pool and peer review process and lessen the journals' workloads and burdens (BaHammam, 2025; Bauchner & Rivara, 2024; Biswas, 2024; Yorukoglu, 2024). As a matter of fact, Yorukoglu (2024), who compared the human and AI (ChatGPT and Gemini) peer review reports with each other, reported that they suggested similar comments despite some differences, e.g., AI reports are longer and contain indirect expressions although they lack the core and general perspective of the manuscript. Similarly, BaHammam (2025) mentions that AI and human reviews have similar scoring for the review process although AI is better at identifying technical (e.g., the suitability of the manuscript to the journal's guidelines), and methodological issues (e.g., detecting statistical inconsistencies) than evaluating novelty or originality of the manuscript. This means that AI could reduce the reviewer burnout and speed up the review procedure even though ChatGPT and Gemini express the same comments in different ways and do not specialize their comments alike human reviews (BaHammam, 2025; Yorukoglu, 2024). However, AI has limitations in criticizing and assessing the novelty of any manuscript, which acts as a cornerstone for the peer review system to decide how well it contributes to the current scientific literature (BaHammam, 2025). Also, AI directly threatens confidentiality and trustworthiness of the peer review process because commercial AI platforms do not guarantee confidentially storing the uploaded manuscripts for the peer review process (BaHammam, 2025). Phrased differently, these platforms incorporate its own risks in terms of data privacy and intellectual property protection (BaHammam, 2025; Biswas, 2024). In fact, this calls for journals/publishers to generate their own AI platforms to ensure confidentiality, trustworthiness and security of the peer review process.

Whatever the authors can upload their manuscripts to AI platforms for proofreading and editing (Biswas, 2024), the journals require them to clearly declare this process in their manuscripts. Because the authors take their own responsibility and address their consents for the use of AI platforms, the journals see it as a regular procedure. However, it is absolutely different in the peer review system since the authors do not have any consent form that the reviewers can use AI platforms for their manuscripts. Indeed, this process directly threatens copyright agreement and data privacy because the manuscripts may involve sensitive information or findings that are specific for the peer review process (Bauchner & Rivara, 2024; Biswas, 2024). If commercial AI platforms store these manuscripts including unique and unpublished findings and exploit them to produce their responses to other inquiries or prompts by placing the submitted manuscripts in the public domain (Bauchner & Rivara, 2024), the journals may encounter some hard legal and lawsuit processes in terms of data privacy and intellectual property protection. Therefore, the journals should immediately add this issue into their guidelines for the reviewers to declare that this responsibility is absolutely belonging to the reviewers, who casually upload the manuscripts to commercial AI platforms. On the other hand, if the journals ask the authors to declare whether they give any permission about the use of commercial AI platforms in the peer review system, they can use them to expedite initial editorial processes (e.g., technical issues) in a shorter time. In fact, the editors should carefully check these feedbacks in terms of consistency, accuracy and correct use since commercial AI platforms suggest several feedbacks without contextualizing them for a specific research field or domain-specific expertise (Biswas, 2024). It is obvious that such a trend seems to increase the editorial workloads although AI acts as a complementary tool for the peer review system with the consent form (BaHammam, 2025). Phrased differently, unless the journals have their own AI platforms to ensure the trustworthiness amongst the authors, reviewers and editors, AI seems not to solve the crisis in the peer review system since it does not aim to replace the real expert judgment (BaHammam, 2025). Given the cost of owning any AI platform, non-profit or small publishers/journals will have still been challenging this crisis to find qualified reviewers,

who critically evaluate the novelty of any manuscript.

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