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The possible application of artificial intelligence ChatGPT in the development of journal *Recent Progress in Sciences*

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Abstract

The already existing artificial intelligence (AI) GPT has attracted widespread attention across various fields. As a natural language processing tool driven by AI technology, GPT has presented huge advantages in copywriting, coding, translation, thesis writing, etc. The application of GPT in various areas brings both benefits and challenges. In the publishing industry, GPT plays pivotal roles in multiple aspects, including authors, reviewers, and editorial offices, and affects the processes of review, publication, and publication service. While it showcases its tremendous advantages in developing journals, there are also many drawbacks. This study aims to demonstrate how to effectively apply GPT to promote the healthy development of the journal *Recent Progress of Sciences*.

Keywords ChatGPT, Artificial Intelligence, Academic Journal, *Recent Progress of Sciences*

The emergence of ChatGPT is a significant milestone in the progress of human civilization. Currently, ChatGPT is widely applied in various fields, including copywriting, coding, translation, thesis writing, and more [1-4]. GPT is a double-edged sword, showing immense advantages and many drawbacks. In the publishing industry, this has shown significant benefits for journal development. Its application allows it to participate in various aspects such as authorship, peer review, and editorial processes, thereby influencing publication, dissemination, and review [5-7]. Some scholars have already investigated the relationship between GPT and the healthy development of journals, but their perspectives are not comprehensive [8]. This study primarily describes how to effectively leverage GPT in the context of ChatGPT to promote the healthy development of our journal *Recent Progress of Sciences* (RPS).

We all know that the formulation of the topic, manuscript writing, data analysis and statistics, chart processing, reference citation, peer review, and editorial publication are essential components that run through the development of academic journals. Therefore, GPT can be involved in various aspects, including those related to authors, reviewers, the editorial department, or the journal itself [5-7]. Helen Pearson's article suggests that artificial intelligence can assist people in quickly summarizing literature and its research content [9]. Meanwhile, in 2023, some scholars attempted to use ChatGPT to generate an entire paper from scratch, marking what seems to be the first formal demonstration of generative AI's capabilities in academic papers [10]. However, this also raised concerns. Hilda Hadan's team surveyed whether reviewers can discern AI-generated writing, and they found that while ChatGPT writing improves readability, language diversity, and information density, it often lacks research details and the reflective insights of the author [11]. Also, the publishers found that there have been certain phenomena on the author's side in failing to disclose their use of ChatGPT in their thesis organization, as well as on the reviewer's side in peer review [12]. Therefore, the publishing industry's supervision departments have raised numerous rules regarding the inapplicability of AI tools (ChatGPT included) to academic publishing. For example, Retraction Watch, a blog by Ivan Oransky and Adam Marcus, has also compiled papers and peer reviews that contain evidence of ChatGPT writing [13]. COPE presented cases from publishers on preventing high volumes of AI-generated articles. Additionally, the guidelines have been updated to state that AI tools should not be credited as authors.

In summary, the AI (Chat GPT)-generated papers or review comments will seriously affect the quality of academic journals. Undoubtedly, this represents a significant challenge brought about by the emergence of AI in the publishing industry. Currently, to develop the journal RPS rigorously and scientifically, our editorial office should pay close attention to any updates in the

guidelines and standards of the publishing industry regarding AI in academic journals and strictly adhere to them. On this premise, the use of AI should be carefully examined from the perspectives of authors, peer reviewers, and publishers.

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