

This submission presents interesting and quite timely research into the use of generative AI in an HE setting. The work is framed as highlighting how generative AI can be used in geoscience education, however there is nothing present that is really geoscience specific - the report could really be for HE in general with the geoscience example being used as an useful case study.

We agree that many aspects discussed in our study could apply broadly to higher education. However, we believe that ChatGPT's responses and effectiveness can vary significantly across different subject matters. For instance, when considering ChatGPT's problem-solving skills, the application and outcomes will undoubtedly differ between disciplines, such as language studies versus geosciences.

Our primary goal is to focus on geoscience students by demonstrating the specific applications and benefits of ChatGPT within this field. This focus is the reason we chose to submit to this specialized journal rather than a general higher education journal. In a country like India, where approximately 10,000 students sit for geoscience examinations annually, it is crucial to understand and address the trend of over-reliance on ChatGPT for quick access to information. Our findings aim to highlight the unique implications and potential of generative AI in geoscience education.

The submission doesn't mention if favourable ethical opinion was obtained from a relevant ethics committee before data was collected - this needs addressing/resolving.

We would like to clarify that permission was obtained from the heads of departments at all three participating institutions prior to data collection. This information is mentioned in the "Ethical Statements" section of our manuscript.

The general discussion/conclusion of the work highlights that generative AI can be useful for structuring and writing blocks of text - and that this text cant be "spotted" by plagiarism platforms - this in itself isn't surprising as creating unique dialogue is what generative AI is supposed to do (it is explained in the work that this indicates the "content" of the work is good - I would argue the content tends to refer to the actual substance of the work, rather than clarity).

We acknowledge your observation regarding the expectation of generative AI to create unique text that cannot be detected by plagiarism platforms. However, it's essential to consider the target audience of our article—students and teachers, rather than researchers.

Our study aims to assess the reliability of the GPT platform specifically within the geosciences field for content generation. Furthermore, we investigate whether teachers can identify AI-generated content using platforms such as GPTzero. This exploration serves to empower educators in discussing ethical concerns at the classroom level, ensuring transparency and integrity in educational practices.

In light of your suggestion, we agree that the discussion on the generated content can be enhanced by analyzing it in terms of substance in the revised manuscript. We will focus on evaluating not only the clarity and structure but also the depth and quality of the content produced by ChatGPT within the context of geoscience education.

Additionally, we appreciate the opportunity to clarify a potential misinterpretation. Our request to ChatGPT was primarily aimed at improving the grammar and English language of published manuscripts, rather than altering their substantive content. We utilized the Grammarly platform to evaluate the text and measure improvements based on grammar and language metrics.

In another part of the research the AI is shown to really struggle with problem solving. I think these two aspects could be looked at in a really constructive way - generative AI could be an accessible platform for students working in second languages, with dyslexia, or many other students to develop their communication skills. The AI can help structure the students original problem solving work into well communicated documents.

We agree that exploring this aspect in a constructive manner could yield valuable insights into how generative AI can serve as an accessible platform for students facing challenges such as working in second languages or having dyslexia.

In response to your suggestion, we plan to expand our discussion to consider the implications of generative AI as a tool for supporting students with diverse learning needs in developing their communication skills. Specifically, we will explore how generative AI can assist these students in structuring their original problem-solving work into well-communicated documents, thereby facilitating their academic success.

I think this would be a much more impactful use of the data presented here - and I would also suggest the work might be framed for a general HE audience. In its current format I think the findings are a little obvious, and do need some contextualising within the rich pedagogic research on the area of AI and digital innovation. To summarise, I think the submission would benefit from a reworking and potentially belongs in a broader HE journal (I don't think the findings/potential are at all specific to geoscience). I would also suggest the submission be updated to discuss updates such as ChatGPT4 and the various AI image generating platforms now available.

While we understand the value of discussing AI integration in education within the broader HE context, our primary aim is to highlight the specific impact and relevance of generative AI, particularly ChatGPT, in geosciences education. Geosciences, as a discipline, presents unique challenges and opportunities for AI integration that may differ from other fields within higher education. Therefore, our intention is to anchor our discussions within the geosciences domain while acknowledging the broader pedagogic research on AI and digital innovation.

We agree that mentioning relevant literature from the broader HE literature would provide valuable context for our study. By referencing existing literature on AI integration in education, we can demonstrate how our findings contribute to and align with the broader discourse on AI in higher education. However, we will ensure that our focus remains on the specific implications and applications of AI in geosciences education throughout the manuscript.

Regarding updates such as ChatGPT4 and other AI image-generating platforms, we appreciate your suggestion and will incorporate relevant discussions into the manuscript within the context of geosciences education.

In summary, while we acknowledge the broader implications of our study, our primary focus remains on the unique challenges and opportunities of AI integration in geosciences education. We will ensure that our manuscript strikes a balance between providing context from the broader HE literature and maintaining a specific focus on geosciences.