

Peer Review

# Review of: "The Psychology of Generative AI in Higher Education: Mapping Benefits and Risks"

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## Critical Review: The Psychology of Generative AI in Higher Education

### Overview

The manuscript presents a timely examination of the psychological dimensions of generative AI in higher education. The authors have undertaken the ambitious task of analyzing this rapidly evolving field through a psychological lens, effectively situating their analysis within the context of the "Sisyphian Cycle of Technology Panic." The paper successfully bridges traditional psychological theories with emerging technological challenges, offering valuable insights for researchers and practitioners in higher education. The structured analysis through ten key psychological areas provides a framework for understanding the complex interplay between AI technology and human psychology in educational settings.

### Major Strengths

The manuscript demonstrates several notable strengths that contribute to the current discourse on AI in education. First and foremost, the authors' decision to frame the analysis through ten distinct psychological areas is effective in organizing the complex landscape of AI's impact on higher education. This framework allows for a systematic exploration of various psychological dimensions while maintaining clarity and coherence throughout the discussion.

The manuscript's theoretical grounding is well done. The authors integrate established psychological theories, such as Self-Determination Theory and the Theory of Planned Behavior, with contemporary AI applications. This integration demonstrates how existing theoretical frameworks can inform our understanding of AI adoption and its psychological implications. The attention to theoretical

foundations provides an academic basis for the arguments presented while ensuring their practical relevance.

Furthermore, the methodological approach, guided by three main premises, shows how to approach this emerging field. The authors maintain a balanced perspective throughout, acknowledging both opportunities and challenges while avoiding the common pitfall of either technological determinism or unwarranted skepticism.

### **Areas of Improvement and Recommendations**

Despite its strengths, several aspects of the manuscript could be enhanced to increase its impact and utility. The transition between sections sometimes lacks smooth integration, occasionally making it challenging to follow the logical progression of ideas. Adding brief transition paragraphs between major sections would help readers better understand the connections between different psychological dimensions of AI in education.

The review methodology could be more explicitly described. While the current approach is sound, readers would benefit from a clear statement about the literature search strategy and inclusion criteria. This addition would strengthen the paper's methodological rigor and help readers better understand how the ten key areas were identified and selected.

The empirical evidence supporting some arguments could be strengthened. While the theoretical discussion is robust, certain sections would benefit from additional quantitative studies, particularly recent ones from 2023-2024. For example, the sections on cognitive offloading and trust calibration could incorporate more recent empirical findings about actual AI implementations in educational settings.

The international perspective could be expanded. Currently, the discussion primarily reflects Western educational contexts. Including more non-Western perspectives and research would provide a more comprehensive understanding of how different cultural and educational systems might respond to AI integration. See Zhang, Y-F., Liu, X-Q. (2024). "Using ChatGPT to promote college students' participation in physical activities and its effect on mental health." *World Journal of Psychiatry*, 14(2), 330-333. <https://doi.org/10.5498/wjp.v14.i2.330>

### **Technical Improvements**

Several technical enhancements would improve the manuscript's accessibility and impact. The citation format should be standardized throughout, and more recent citations from 2023-2024 would

strengthen the analysis's contemporary relevance (see the suggestions I have appended). Adding visual aids, such as conceptual diagrams or summary tables, would help readers grasp complex relationships between different psychological factors.

The structure could be enhanced by adding clear subsections within each major section. Some lengthy paragraphs could be broken down to improve readability, and more concrete examples would help illustrate theoretical points. These changes would make the content more accessible while maintaining its academic rigor.

### **Impact Enhancements**

Several additions would increase the manuscript's practical impact. Including more concrete examples of successful AI implementation in educational settings would help readers understand how theoretical insights translate into practice. Case studies of institutions that have effectively integrated AI while addressing psychological concerns would be particularly useful.

The policy implications could be strengthened by providing more specific recommendations for institutional policy and addressing regulatory considerations more explicitly. Including practical takeaways for different stakeholders (administrators, faculty, students) would enhance the paper's utility for practitioners.

For Cognitive Offloading and AI Trust:

1. Budhathoki, T., Zirar, A., Njoya, E. T., Timsina, A. (2024). "ChatGPT adoption and anxiety: A cross-country analysis utilising the unified theory of acceptance and use of technology (UTAUT)". *Studies in Higher Education*, 49(5), 831-846. <https://doi.org/10.1080/03075079.2024.2333937>
2. Amoozadeh, M., Daniels, D., Nam, D., Kumar, A., Chen, S., Hilton, M., Srinivasa Ragavan, S., Alipour, M.A. (2024). "Trust in Generative AI among Students: An exploratory study". *Proceedings of the 55th ACM Technical Symposium on Computer Science Education V. 1*. 67-73. <https://doi.org/10.1145/3626252.3630842>

For International Perspectives:

1. Zhang, Y-F., Liu, X-Q. (2024). "Using ChatGPT to promote college students' participation in physical activities and its effect on mental health." *World Journal of Psychiatry*, 14(2), 330-333. <https://doi.org/10.5498/wjp.v14.i2.330>

## **Declarations**

**Potential competing interests:** No potential competing interests to declare.