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REVIEWER'S REPORT

Manuscript No.: IJAR-57882

Title: Cognitive Dependency on Artificial Intelligence Among Students: A Comparative Study of Independent Problem-Solving Performance After AI-Assisted Learning

Recommendation:

Accept as it is .....

Accept after minor revision.....yes.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality			Y	
Techn. Quality			Y	
Clarity			Y	
Significance			Y	

Reviewer's ID: JPR-Dr.shaweta Sachdeva

Detailed Reviewer's Report

1. The manuscript addresses a highly relevant and contemporary issue concerning the cognitive impact of AI-assisted learning among students. The topic is timely and significant for educators, policymakers, and researchers in educational technology.
2. The abstract is concise and clearly summarizes the objectives, hypotheses, methodology, and findings. The inclusion of statistical values strengthens the credibility of the study.
3. The introduction is well-developed and supported with recent literature. The authors effectively establish the importance of investigating AI dependency and cognitive offloading in educational settings.
4. The literature review is comprehensive and theoretically grounded. The discussion of cognitive offloading, self-efficacy, dual-process theory, and behavioral dependency provides strong conceptual support for the study.
5. The research objectives and hypotheses are clearly formulated and logically aligned with the theoretical framework and literature review.
6. The methodology section is detailed and transparent. The explanation of sampling method, variable construction, questionnaire design, and ethical considerations enhances the reproducibility of the study.
7. The study demonstrates good internal consistency for most constructs, particularly the AI Dependency Level and Independent Problem-Solving Performance scales. Reporting Cronbach's alpha values strengthens methodological rigor.
8. The statistical analysis is appropriate for the exploratory nature of the research. The use of Pearson correlation, Welch t-test, Mann–Whitney U test, and effect size interpretation reflects sound analytical practice.
9. The discussion section is insightful and balanced. The authors appropriately distinguish between AI usage and dependency-oriented usage, which adds conceptual clarity and practical relevance to the findings.

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10. The manuscript honestly acknowledges its limitations, including small sample size, convenience sampling, and reliance on self-reported measures. This transparency improves the academic quality of the work.
11. The recommendations and future scope sections are practical and valuable. The "attempt-first protocol" and AI literacy suggestions are especially useful for educational implementation.
12. The manuscript would benefit from the inclusion of objective cognitive performance measures such as standardized reasoning or memory tests in addition to self-report indicators, as currently acknowledged by the authors.
13. The sample size is relatively small (n = 38), which limits the generalizability of the findings. Future studies with larger and more diverse populations would strengthen the validity of conclusions.
14. Some sections of the manuscript are highly descriptive and lengthy. The readability could be improved by reducing repetition and condensing certain theoretical explanations.
15. The paper could be further strengthened by adding visual representations such as conceptual frameworks, regression plots, or correlation diagrams to support the statistical findings.
16. The references are recent, relevant, and well-integrated into the discussion. The manuscript demonstrates strong engagement with current scholarship on AI in education and cognitive psychology.
17. Overall, the manuscript presents a meaningful exploratory contribution to the emerging field of AI dependency and student cognition. With minor revisions related to presentation, sample expansion, and inclusion of objective cognitive measures, the study has strong potential for publication.