Review of: "Augmented Reality (AR) Technology on Student Engagement: An Experimental Research Study"

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Potential competing interests: No potential competing interests to declare.

Thank you for the opportunity to review your article titled "Augmented Reality (AR) Technology on Student Engagement: An Experimental Research Study." I appreciate the effort and dedication you have invested in this research. Here are some comments and suggestions that I hope will be helpful for the enhancement of your study:

Aspects of Methodology

Selection and Allocation of Participants: Your choice of a sample of 100 high school students is commendable. However, further elaboration on the selection process (e.g., were there any specific criteria used) could strengthen the methodological robustness of your study.

Pre-test/Post-test Design: This design is well-suited for your research objectives. However, I recommend providing more details about the instruments used in the pre-test and post-test, as well as how you ensured that both tests were fair and balanced in measuring learning outcomes.

Instrumentation Aspects

1. **Questionnaire:** The use of a questionnaire as one of your research instruments is a good choice. However, it might be beneficial to delve deeper into students' perceptions of AR, not just in terms of their satisfaction levels, but also regarding specific aspects they found helpful or hindering in their learning process.

Research Findings

Student Responses to AR: It is interesting to see that the majority of students found the use of AR engaging and beneficial in their learning. However, there is also a significant percentage who felt neutral or even negative about their AR experience. This highlights the importance of further exploring the specific conditions or contexts where AR is less effective or might even be counterproductive.

Technical Improvements and Curriculum Integration: Feedback on the need for technical improvements and better integration with the curriculum is crucial. This indicates that while AR has great potential, there is still room for improvement in terms of technology and the way material is presented.

General Comments and Suggestions

Balance Between AR and Traditional Teaching Methods: I appreciate your recommendation for achieving a balance between the use of AR and traditional teaching methods. This is vital to ensure that the introduction of new technologies like AR adds value and does not replace human interaction and other proven learning methods.

Diversification of Research Methods: I also suggest possibly incorporating more qualitative research methods, such as in-depth interviews or case studies, to gain a richer understanding of students' experiences with AR.

Expansion of Sample and Context: For future research, consider expanding your sample and the context of your research. Testing the effectiveness of AR in different educational levels or in diverse cultural contexts might reveal additional valuable insights.