

Review Form 3

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| Journal Name: | Asian Journal of Probability and Statistics |
| Manuscript Number: | Ms_AJPAS_125425 |
| Title of the Manuscript: | Assessing Students' Engagements in Virtual Resources: Impacts of Localization of PhET Interactive Simulations in Indigenous Nigerian Language |
| Type of the Article | |

PART 1: Review Comments

| Compulsory REVISION comments | Reviewer's comment | Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i> |
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| <p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p> | <p>The manuscript "Assessing Students' Engagements in Virtual Resources: Impacts of Localization of PhET Interactive Simulations in Indigenous Nigerian Language" is significant for the scientific community as it addresses the critical issue of language barriers in education, particularly in STEM fields. By localizing PhET simulations into indigenous Nigerian languages, the study fosters inclusivity and enhances students' comprehension of complex scientific concepts. I appreciate this manuscript because it highlights the importance of cultural and linguistic relevance in learning tools, which can boost engagement and educational outcomes. Additionally, it opens doors for further research into localized education technologies, promoting a more equitable learning environment globally.</p> | |
| <p>Is the title of the article suitable? (If not please suggest an alternative title)</p> | <p>The title "Assessing Students' Engagements in Virtual Resources: Impacts of Localization of PhET Interactive Simulations in Indigenous Nigerian Language" is generally clear and informative, but it could be more concise and specific. It can be improved by highlighting the core focus on education and the role of language localization more prominently.</p> <p>A suggested alternative title could be: "Enhancing Student Engagement Through Localization: PhET Simulations in Indigenous Nigerian Languages"</p> <p>This version retains the key elements while being more focused and easier to grasp.</p> | |

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| <p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p> | <p>The abstract of the article provides a good overview of the study, its objectives, methodology, and key findings. However, it can be improved for clarity and focus. Below are my suggestions:</p> <p>Points to Add:</p> <ol style="list-style-type: none"> Clarification of PhET Simulations: Briefly explain what PhET simulations are for readers unfamiliar with them. Clearer mention of the indigenous languages used: Highlighting which indigenous Nigerian languages were used for localization could make the study's cultural relevance clearer. Implications for broader education: A statement on the potential impact of localized learning tools in other STEM fields or regions would strengthen the abstract. <p>Points to Revise or Remove:</p> <ol style="list-style-type: none"> Overuse of technical terms: Phrases like “socio-cultural and situated learning,” “formal language of Mathematics instruction,” and other jargon-heavy terms can be simplified to make the abstract more accessible. Condense methodology: The detailed explanation of exploratory factor analysis (EFA) and statistical indices can be shortened, as it overwhelms the reader and could be saved for the main text. <p>Suggested Revision:</p> <p>This study investigates the impact of localized PhET Interactive Simulations on students' engagement and achievements in Mathematics education. Using the Students' Engagement Measurement Scale (SEMS) with cognitive, behavioral, agentic, and emotional constructs, the study analyzed how a virtual learning tool localized in indigenous Nigerian languages affected a sample of 333 students. Results indicate that agentic and emotional engagement significantly improved students' performance, highlighting the importance of integrating first language (L1) in Mathematics instruction. The findings suggest that localized digital resources enhance learning outcomes by fostering greater autonomy, interest, and cognitive engagement in students.</p> <p>This revision is more concise while retaining key points.</p> | |
| <p>Are subsections and structure of the manuscript appropriate?</p> | | |
| <p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p> | <p>The manuscript appears to be scientifically robust and technically sound, as it employs established research methodologies such as exploratory factor analysis (EFA) and regression analysis to assess the impact of localized PhET simulations. The use of the Students' Engagement Measurement Scale (SEMS) with well-defined constructs (cognitive, behavioral, agentic, and emotional engagement) ensures a comprehensive evaluation of student engagement. The statistical analysis seems thorough, with appropriate measures of validity and reliability.</p> | |
| <p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p> | <p>The references are sufficient and recent.</p> | |

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| Minor REVISION comments | | |
| Is the language/English quality of the article suitable for scholarly communications? | The language of the article is mostly suitable for scholarly communication, but it could benefit from improvements in clarity, grammar, and conciseness. Some areas of the text contain complex sentence structures and technical jargon that may hinder readability. | |
| Optional/General comments | | |

PART 2:

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| | Reviewer's comment | Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i> |
| Are there ethical issues in this manuscript? | <i>(If yes, Kindly please write down the ethical issues here in details)</i> | |

Reviewer Details:

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