

Review of: "Assessing students' attitudes and perceptions towards statistical literacy in a university system in a developing African country"

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Potential competing interests: No potential competing interests to declare.

This manuscript is crucial for the scientific community as it addresses pressing issues in statistics education, offering insights into students' attitudes, cognitive competence, effort, perceived value, and difficulties with statistics. These findings can significantly influence teaching strategies and curriculum development, making it a valuable contribution to improving statistics education.

The title "Exploring Teaching and Learning Approaches in Statistics Education: A Case Study at Chinhoyi University of Technology, Zimbabwe" aptly summarizes the article's focus on examining methods of teaching and learning statistics at a specific institution, providing a clear indication of the study's context and scope.

The abstract is fairly comprehensive, summarizing the study's objectives, methods, key findings, and interpretations related to students' attitudes, cognitive competence, effort, value perception, and difficulties in statistics education. However, a slightly more concise presentation could improve readability while retaining critical information.

The manuscript is well-structured with appropriate subsections that guide the reader through the introduction, methods, analysis of different constructs related to students' attitudes, and a comprehensive conclusion with recommendations. This structure enables a clear presentation of the research process and findings.

The manuscript appears scientifically correct. It utilizes validated instruments, employs a mixed-methods approach for data analysis, and conducts rigorous statistical analyses, supporting its findings with references to existing literature. However, like any study, there might be potential limitations or areas for further exploration to consider. Overall, the methodology and analyses employed suggest scientific validity in exploring statistics education.

While the references in the manuscript cover various relevant aspects of statistics education, it could benefit from more recent publications to enhance its currency. Including studies published within the last few years (3-5 years) would strengthen the manuscript's contemporary relevance. Additionally, expanding the references to include international perspectives and innovative teaching methodologies in statistics education could provide a more comprehensive overview of the field.

The language and English quality of the article generally meet the standards for scholarly communication.

From the provided excerpt, explicit ethical issues aren't evident. However, ethical concerns in research often involve participant confidentiality, obtaining informed consent, avoiding biases, and following specific guidelines. The manuscript mentions surveying students and stakeholders, indicating a data collection process that requires confidentiality and consent. A thorough examination of the complete manuscript is needed to assess if ethical considerations were properly addressed throughout the research.

The provided excerpt doesn't explicitly mention competing interests. However, to determine the presence of any competing interests, a comprehensive review of the complete manuscript, including author disclosures, is required. Declarations of potential conflicts of interest are essential in scholarly articles to maintain transparency and credibility in research findings.

Based on the provided excerpt and the content review, I would suggest a rating of "Minor Revision" (>8-9) for this manuscript.

1. Expand the abstract to include specific numerical results or key statistical findings, providing readers with a clearer understanding of the study's outcomes and significance.
2. Enhance the methodology section by providing more comprehensive details on the sampling technique, questionnaire design, and data analysis methods employed during the study, ensuring transparency and facilitating reproducibility of the research.
3. Incorporate a discussion section that addresses the practical implications of the study's findings, offering recommendations for educators or policymakers to improve statistics education in higher institutions, thereby adding depth and real-world applicability to the research outcomes.