

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

Robert Wakhata<sup>1</sup>

<sup>1</sup> University of Rwanda

Potential competing interests: No potential competing interests to declare.

## Review on Assessing students' Attitudes and Perceptions towards Statistical Literacy in a University System in a Developing African Country

This study aimed at assessing students' attitudes and perceptions towards statistical literacy in a university system in a developing African country. The abstract has been well written. The introduction of this paper flows coherently, is explained very well, and the author writes extremely well, explaining the above theoretical ideas simply and clearly, which was admirable. The weakness in the introduction of this paper is the lack of the definition of statistics education and the inherent citations of authors from different contexts. It would be suitable to include topics and sub-topics covered under statistics education and relate them to the learning of statistics, explaining misconceptions and challenges to the students. The problem statement in this section has not been tackled well. What has been done in Zimbabwe to minimize this problem? If this problem persists, what are the likely consequences? I would have loved to see these gaps with related citations linking what is done in Zimbabwe to other settings and contexts.

The methods section is well written. The authors have provided the sketch map showing the location of the University. There is a need to add time scope and content scope with justifications. There is no evidence whether or not the Survey of Attitudes towards Statistics (SATS) instrument was pilot tested, thereby compromising the validity and reliability of the instrument. The presentation of the findings and the subsequent discussion was well done. Did you adapt or adopt the instrument? I would recommend the authors to supplement the quantitative findings with the effect sizes instead of relying on the p-value only to draw inference. Whereas p-values inform readers whether an effect exists, they do not reveal the size of the effect. Please support your findings with suitable citations. I would like to recommend that the authors strengthen these sections, making it clearer where the key findings are stated and connecting them implicitly to the existing literature in the discussion.

The mixed methods approach was stated in the methodology. However, the findings presented are more quantitative than qualitative. It would be more plausible to include observation analyses to reveal your qualitative stance. This, too, should be analyzed. The findings provided do not substantially lead to the stated conclusion. The authors may provide more elaborate details on this, especially when answering specific objectives. The study design, approach, methods, theoretical and conceptual framework, and results, conclusions, and recommendations should be well linked to the objectives. The

discussion also does not clearly link the existing literature and so does not locate the findings within the literature since the analysis is skewed to quantitative. In the same manner, more details would enhance the results from the classroom observations and interview or videotaping (if any) as qualitative findings to supplement quantitative data. This would strengthen the analysis and conclusions.

Overall, I recommend this article for publication with minor corrections if these suggestions are taken into consideration.