

Review of: "Influence of Motivation on Pre-service Primary Teachers' Performance in Mathematics"

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Potential competing interests: No potential competing interests to declare.

Review

1. Introduction

- The author effectively outlines the significance of the topic, highlighting the challenges faced in the teaching and learning of mathematics, with a focus on students' poor performance. The challenges facing the teaching & learning of math were identified as the problem and the student's poor performance. How the author related the two may need to be restated.
- The well-developed literature review demonstrates a good understanding of existing research on motivation and academic performance in mathematics. The author integrated recent studies. The definition and conceptualisation of motivation are clear and aligned with existing literature. The distinction between intrinsic, extrinsic, and demotivation is well-articulated. The author provides a solid justification for the study by emphasising the crucial role of motivation in improving students' performance in mathematics.
- However, while the literature review is comprehensive, the author should consider providing a more explicit synthesis of the existing literature. How do the reviewed studies relate, and what themes or patterns emerge from the literature? She should emphasise the gaps or controversies in the literature she aims to address.
- In addition, I would suggest that the author separate the literature review from the introduction.
- The "Despite" in the closing paragraph of the introduction might imply a contradiction that isn't intended. The author may consider using a different conjunction, such as "Given".
- The author should ensure a smooth transition from the introduction to the problem statement. Then, a paragraph at the end of the introduction outlines how the study is structured.

1. Statement of the Problem

- The opening sentences succinctly present the importance of mathematics in society and the current challenges in students' performance in the subject. It would be beneficial to provide specific statistics or evidence regarding the reported poor performance to emphasise the problem's urgency further. Reference to the literature is highly required.
- The author needs to identify the gap in the existing literature that your study aims to address. The author briefly mentions that much attention has not been given to comparing motivation and achievement among primary pre-service

teachers in mathematics. Still, it would be helpful to elaborate on why this is a critical gap and how your study intends to fill it.

- The author also needs to specify the factors that have been suggested to be responsible for students' failure in mathematics. It could provide a more nuanced understanding of the challenges and help readers grasp the issue's complexity.
- Furthermore, there is a need to emphasise the societal implications of the problem. How does the poor performance of primary pre-service teachers in mathematics impact education and, subsequently, society's development?
- At this junction, it is essential that the author clearly state that she aims to investigate the influence of motivation on the learning of mathematics among primary pre-service teachers. They should then be followed by a concise transition statement of your research questions to guide readers on what to expect in the subsequent sections.

1. Research Questions

- I suggest the author remove the heading and make these few lines part of the previous section.
- The research questions are clear and straightforward, focusing on the relationship between intrinsic motivation, extrinsic motivation, and mathematics performance among primary pre-service teachers. However, the author may need to state the aspects of mathematics performance that will be considered.

1. Methodology

- Choosing a correlational survey research design aligns well with your research questions, as the author aims to explore the relationships between motivation and mathematics performance. The author needs to clarify why this design is suitable for study.
- The author should state the characteristics of the population (entire primary pre-service teachers at Emmanuel Alayande College of Education, Oyo) and provide a rationale for the sample size of 70 primary pre-service teachers.
- She mentioned that the sample was purposively selected. She should provide a brief rationale for using purposive sampling and perhaps discuss any potential limitations of this sampling method.
- The author described the two sections of the questionnaire well. She may need to confirm to the reader that the questions in Section B align directly with the research questions. She may also consider providing a brief overview of the theoretical framework that informed the development of the questionnaire.
- The author may also need to justify the choice of a four-point scale and ensure that it aligns with the research objectives.
- It's excellent that the author conducted reliability testing using the Cronbach alpha technique, and an alpha of 0.81 indicates good internal consistency. She may need to briefly explain to the readers why this is important for the instrument's reliability.
- The author clearly stated that both descriptive statistics were used for data analysis. She must briefly justify choosing the Pearson Product Moment Correlation coefficient for inferential statistics.
- The author should provide some details about the trial-testing of the instrument, such as the number and characteristics of the respondents involved in the trial, and discuss (if) any adjustments were made to the

questionnaire based on the trial results.

- The author needs to briefly mention ethical considerations, such as informed consent from participants and confidentiality.

1. Discussion of Results

- This section presents the positive correlation between intrinsic motivation and performance in mathematics, supported by a correlation coefficient of 0.814. The clarity will enhance the reader's understanding of the relationship.
- It's commendable that the author compares her findings with those of previous studies and continues to integrate these comparisons. Still, she may consider elaborating on the specific similarities or differences between this study and the previous ones.
- While the author mentions a positive correlation between extrinsic motivation and performance in mathematics, she needs to discuss the implications of this correlation to understand how extrinsic motivation influences academic performance. In addition, she needs to elaborate on the role of extrinsic motivation in mathematics performance. How does it contribute to academic achievement, and what are the potential implications for educational practices or interventions?

Overall, I would say the paper appears to be well-structured and generally well-written. It demonstrates an understanding of the research topic, integrates relevant literature, and follows a logical progression.