

REVIEWER'S REPORT

Manuscript No.: IJAR-59069

Title: IMPACT OF INNOVATIVE TEACHING METHODS ON THE ACADEMIC PERFORMANCE OF NURSING AND OBSTETRICAL STUDENTS AT UNIVERSITY OF PARAKOU .

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		X		
Techn. Quality	X			
Clarity		X		
Significance	X			

Reviewer's ID: JPR- 212

Detailed Reviewer's Report

General Assessment:

This is a well-conceived and methodologically sound study that makes a valuable contribution to the literature on nursing and midwifery education in West Africa. The paper addresses a timely and important issue: the impact of innovative teaching methods and Information and Communication Technologies (ICTs) on academic performance in a context of significant student enrolment growth. The mixed-methods design is appropriate and well-executed, combining a robust quantitative analysis of over 53,000 exam grades across four academic years with qualitative insights from student questionnaires. The study's findings—that innovative teaching methods are associated with a significant increase in grades and that ICT is widely used and positively perceived by students—are clear, well-supported, and have important implications for pedagogical practice and institutional policy. The theoretical framework, drawing on Vygotsky, Kolb, and Bandura, provides a solid foundation for the study. The manuscript is generally well-written, logically structured, and demonstrates a strong command of the relevant literature. The limitations of the study are acknowledged. The manuscript requires only minor revisions to address a few presentation and reporting issues before publication.

Minor Issues (to be addressed in revision):

1. Inconsistencies and Errors in Presentation:

- **Table 2 (Page 4):** Table 2 is referenced in the text (line 109), but the table itself appears to be missing or is not properly formatted in the manuscript. The page contains a large block of empty space where the table should be. The author(s) must ensure that the table is included and properly formatted, with all relevant statistics (coefficients, standard errors, confidence intervals, p-values, and model fit statistics).
- **Table 3 (Page 5):** Table 3 is referenced in the text (line 123: "The majority of students (97.2%) use ICT..."), but it is not present in the manuscript. The table presenting the types of ICT used by students is missing. This is a critical omission, as these data are central to the study's second objective. The author(s) must include this table.
- **Inconsistent Terminology:** The paper uses both "obstetrical" and "obstetric" in different places (e.g., title vs. abstract). The author(s) should choose one term and use it consistently. In the title, "Obstetrical" is used; in the abstract, "obstetric" is used. The standard term in most academic contexts is "obstetric" or "midwifery." The author(s) should consider using "midwifery" throughout for consistency with the program name (IFSIO) and contemporary terminology.

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- **Formatting of References:** The reference list has inconsistent formatting. For example, some references use "et" and others use "&" or "and." Some journal titles are in italics, while others are not. The author(s) should ensure that all references follow a consistent style (e.g., APA, Vancouver).
- **Typographical Errors:** There are a few minor typographical errors (e.g., "et" in French references vs. "and" in English references; "Pp." vs. "pp."). A careful proofread is needed.
- 2. **Clarification of Methodology:**
 - **Sample Size Calculation:** The sample size calculation is described: "determined using Schwartz's formula: $N = (1.96^2 \times 0.15 \times 0.85) / 0.05^2 = 196$, adjusted to 213 to account for potential non-response" (lines 69-71). However, the final sample was 287 students. The author(s) should explain how the final sample size was determined (e.g., was it based on the number of students who responded to the questionnaire? Was the sample size increased to improve statistical power?). This is a minor point but should be clarified.
 - **Classification of Innovative Methods:** The paper states that the classification of methods as "innovative" relied on "institutional criteria that may involve a degree of subjectivity" (lines 213-214). The author(s) should provide more detail on what these institutional criteria were. How were courses classified as using innovative methods versus traditional methods? This is important for the replicability and validity of the study.
- 3. **Reporting of Results:**
 - **Table 2 (Missing):** As noted above, Table 2 is critical for the quantitative analysis. The author(s) should ensure it is included and clearly presented. The regression model should report all relevant coefficients, not just the main effect of innovative methods.
 - **Table 3 (Missing):** The table on ICT usage (Table 3) is missing. This table should be included to support the findings presented in the text.
 - **Effect Size Interpretation:** The paper reports an effect of +0.49 points on a 0-20 scale. The author(s) could provide a brief interpretation of what this means in practical terms. For example, what does a 0.49-point increase represent in terms of grade classification (e.g., moving from a "pass" to a "good" grade)? This would help readers understand the practical significance of the finding.
 - **Qualitative Analysis:** The qualitative analysis is well-presented, with illustrative quotes. The author(s) could strengthen this section by providing more context on the coding process. How many themes were identified? How were the quotes selected? A brief methodological note on the qualitative analysis would enhance transparency.
- 4. **Discussion and Limitations:**
 - The discussion is well-argued and links the findings to the existing literature. However, the author(s) could further explore the reasons for the more pronounced effect observed in 2024-2025. Was this due to increased teacher training, better implementation of innovative methods, or other factors? A more detailed discussion of this trend would be valuable.
 - The limitations section is good but could be expanded to include the potential for selection bias (e.g., students who use ICT more may also be more motivated and perform better regardless of the teaching method). The author(s) could also discuss the potential for confounding variables that were not controlled for in the analysis.
- 5. **Suggestions for Strengthening the Paper:**
 - **Recommendations:** The recommendations are practical and well-founded. The author(s) could make them more specific by suggesting concrete steps for implementation (e.g., "Develop a teacher training program focused on the flipped classroom and simulation-based learning").
 - **Future Research:** The suggestions for future research are good. The author(s) could add a suggestion to investigate the specific types of ICT tools that are most effective for different learning outcomes (e.g., knowledge acquisition vs. clinical skills).

Specific Comments for the Authors (for a Minor Revision):

This is an excellent and important study that will be of great interest to educators, researchers, and policymakers in nursing and midwifery education. The mixed-methods design is robust, and the findings are compelling. To prepare the manuscript for final publication, the author(s) should address the following minor points:

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- Include Missing Tables:** Ensure that Table 2 (regression analysis) and Table 3 (ICT usage) are included and properly formatted.
- Correct Typographical and Formatting Errors:** Proofread the manuscript carefully to correct all errors and ensure consistent formatting of references.
- Standardize Terminology:** Choose one term ("obstetric" or "midwifery") and use it consistently throughout.
- Clarify Sample Size and Classification of Methods:** Provide more detail on the sample size calculation and the criteria used to classify courses as "innovative."
- Strengthen the Qualitative Section:** Briefly describe the coding process and how themes were identified.
- Expand the Discussion:** Discuss the reasons for the more pronounced effect in 2024-2025 and consider potential confounding variables.
- Make Recommendations More Specific:** Provide concrete steps for implementing the recommended changes.

Conclusion:

This manuscript presents a well-designed, well-executed, and highly relevant study on the impact of innovative teaching methods and ICT on academic performance in nursing and midwifery education in Benin. The findings are clear and have important implications for pedagogical practice and institutional policy. The paper is well-written and makes a valuable contribution to the field. With the minor revisions outlined above, particularly the inclusion of the missing tables and the correction of formatting issues, this manuscript will be ready for publication. The recommendation is for acceptance after minor revision.