Review of: "Effects of Teachers' Professional Development on Students' Academic Achievement"

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In this article, the author examines a key policy measure adopted by the Nigerian government to improve educational outcomes - large-scale teacher training programs. The author applied a robust quasi-experimental, pretest-posttest design with treatment and control groups to assess changes in students' scores before and after participating in professional development workshops for their teachers. The large sample size of over 2800 students contributes to the strength of the analysis. There is a clear statement of the hypotheses, as well as the variables and statistics used in order to evaluate them.

The literature review effectively establishes the importance of teacher quality and ongoing training to improve learning outcomes. As a result of teachers' crucial role in influencing students' educational outcomes, better teacher policies may be helpful to improve educational outcomes. The report summarizes prior research on the effects of professional development interventions on student achievement, highlighting some mixed findings in developing countries. Thus, the importance of this study for further evaluation.

Although briefly described, the theoretical framework for continuous improvement is appropriate. There is a detailed discussion of the sample selection, the instrumentation, and the analytical procedures. Based on the statistical assumptions, the quantitative comparisons across groups over time appear to be credible.

The results indicated that “there was a significant difference in the post-achievements of the students of the teachers who participated in the teacher cluster-meeting workshop and those of their counterparts who did not participate in the workshop”. The discussion relates the findings back to the literature review context thoughtfully. The author notes that the findings “corroborate” previous evidence that "improving the quality of the teaching workforce is equivalent to improving student outcomes”.

Even though there were interesting findings, limitations could have been acknowledged regarding the non-randomized design and sample specificity to one Nigerian state. The non-randomized design and self-selection of teachers limit wider application. Providing subgroup analysis of impacts may have also yielded additional insights. Nonetheless, as the author concludes, “effective teaching and learning of mathematics in the school system demands the application of updated knowledge that will bring about active learning” through ongoing quality teacher training initiatives.