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

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**Potential competing interests:** No potential competing interests to declare.

This is an important study, and I appreciate the work undertaken by the author to support the government's initiatives and improve professional development in the region. I have some suggestions that I believe will make the manuscript stronger:

1. This statement was a bit confusing to me "Though earlier reviews of pedagogical interventions showed encouraging evidence (Conn, 2017)". You are talking about professional development for teachers, so why is this statement about pedagogical interventions (which implies strategies for teaching and learning in the classroom) suddenly featuring in the middle here?

2. I think you should separate the Introduction and the Literature review sections and label them clearly.

3. The introduction should be short, and should clearly state (a) purpose / aims of the study (b) contextual significance of the study. Statements like, "the aim of this study was to ___". "The study took place in ___".

4. "The study was based on the theory of continuous improvement of Masaaki Imai" Which study are you talking about? The Ladele study? Your study?

5. The theory of continuous improvement is suddenly presented, without a smooth transition from prior paragraphs or a smooth transition into subsequent paragraphs i.e. it is presented out of context. I can't understand what it has to do with anything you have discussed thus far or in subsequent paragraphs. If you are trying to make a connection between "continuous improvement" and "on-the-job training" then I do not think they are necessarily connected. The plan-do-check-act frame is a model for reiterating the design of interventions using data collected on processes and outcomes efficacy. It is not merely about the "ongoing" nature of an intervention like professional development.

6. The literature review would benefit greatly if organized into sections with headings. It is difficult to take away big ideas at present.

7. If the entire study is centered on teacher cluster meeting workshops, then the literature review should focus on this very specific type of interventions - (1) what is looks like in action, and (2) what prior research says about (a) its effects on teacher KSA, classroom practice, and student learning outcomes, and (b) essential inputs and implementation fidelity variables that determine its success. If you don't find prior research on cluter meeting workshops, then you might need to determine what type of generic PD intervention they relate to i.e. are they similar to intensive summer workshops, or

teacher study groups, or professional learning communities, or something else. Then you would look for research on those PD interventions. This is important because not all PD has postiive effects, and different interventions have different outcomes and levels of efficacy. So you must present a literature review on the precise intervention that is central to your study.

8. The research design and sampling design should be explained in terms of the strategy used (as per existing research). For example, if the research design was quantitative then what type / form and support with rationale for choosing this approach and back up with prior research. Same for sampling.

9. Findings share significance but not magnitude i.e. effect sizes - which are important to present. Also, such fidnings need to be presented in context i.e. is the effect size large or medium? How does it compare to the efficacy of typical results from PD interventions in prior literature? And so on...

10. If it difficult to say if the conclusions are supported by the data, considering the issues raised above. At present, it sounds like a bit of a reach and sweeping judgement.

Overall, my suggestion is to find 2-3 HIGH QUALITY recent studies on topics similar to yours and then model your paper's structure on those papers. This helped me quite a lot with my first few publications.