



Paper: “Pre-Service Teachers’ Beliefs, Difficulties and Practices Toward Inquiry-Based Learning in Mathematics: A Mixed-Method Approach”

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Peer review:

Reviewer 1: Luis Ricardo Ramos-Hernandez
Benemérito Instituto Normal del Estado "Gral. Juan Crisóstomo Bonilla", Mexico

Reviewer 2: Robert Kalima
Mzuzu University, Malawi

Reviewer 3: Veneranda Hajrulla
University of Vlora “Ismail Qemali”, Albania

Reviewer 4: Hector Aponte-Alequin
University of Puerto Rico

Reviewer D:

Recommendation: Revisions Required

The TITLE is clear and it is adequate to the content of the article.

The TITLE is incomplete. The element or phrase of mathematics is absent. Going through the manuscript indicates that the IBL was being studied in mathematics which is missing in the title

The ABSTRACT clearly presents objectives, methods, results, and conclusions.

The abstract completely summarises and reflects the entire study. However, the sampling strategy for the in-depth interviews and focus group discussions needs to be clearly stated.

There are a few grammatical errors and spelling mistakes in this article.

Yes. It seems Grammarly was well used as a tool as declared by the authors

The study METHODS are explained clearly.

No, they were not adequately explained as indicated in the manuscript itself. The survey needs to be clearly explained for example, what do the authors mean by "modified surveys"? Further to that, how were the participants for the in-depth interviews and focus group discussions sampled?

The results are clear and do not contain errors.

Minor errors were noted in the presentation of results on quantitative results which do not clearly convey meaning to the reader. An excellent presentation was made on the qualitative results

The CONCLUSION or summary is accurate and supported by the content.

Well concluded and adequately reflects the content.

The list of REFERENCES is comprehensive and appropriate.

Comprehensive reference list

Please rate the TITLE of this paper.

[Poor] 1-5 [Excellent]

3

Please rate the ABSTRACT of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the LANGUAGE of this paper.

[Poor] 1-5 [Excellent]

5

Please rate the METHODS of this paper.

[Poor] 1-5 [Excellent]

3

Please rate the RESULTS of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the CONCLUSION of this paper.

[Poor] 1-5 [Excellent]

5

Please rate the REFERENCES of this paper.

[Poor] 1-5 [Excellent]

5

Overall Recommendation!!!

Accepted, minor revision needed

Comments and Suggestions to the Author(s):

This is good research as it is about one of the most avoided teaching/learning strategies in the challenging STEM discipline, mathematics. Relevant study in the 21st century where teacher-centred teaching strategies are in the spotlight and learner agency and authority are being highly valued. I suggest you come explicitly on mathematics as the focus of the study and pull this out throughout the manuscript.

Reviewer E:

Recommendation: Revisions Required

The TITLE is clear and it is adequate to the content of the article.

The title is clear, specific, and aligned with the content of the manuscript. It accurately reflects the three core dimensions examined in the study, regarding beliefs, difficulties, and practices; and it also signals the use of a mixed-method approach. It is informative and appropriate for the scope of the paper.

The ABSTRACT clearly presents objectives, methods, results, and conclusions.

The abstract presents the purpose, design, sample, instruments, and general findings of the study. However, it is somewhat long and would benefit from tighter wording and greater precision, especially in the statement of the problem and in the phrasing of the main findings. A more concise structure would improve readability and impact.

There are a few grammatical errors and spelling mistakes in this article.

The manuscript addresses a relevant topic, but the language requires some proofreading table editing. There are some grammatical problems regarding phrasing, repetition, and sentences that sound translated rather than naturally written in academic English.

The study METHODS are explained clearly.

The mixed-method design is appropriate for the topic, and the manuscript provides a general overview of the participants, instruments, and procedures. However, the methods section still needs precision. In particular, the manuscript should clarify the adaptation and validation of the questionnaire, explain more clearly how the qualitative and quantitative strands were integrated, and better justify the analytic strategy. Since the study mentions relationships among beliefs,

difficulties, practices, and attitudes, it would also be helpful to explain why only descriptive statistics were used and whether inferential analysis was considered. This would strengthen the argument. In that sense, rather than being a weakness, it could turn into a strength.

The results are clear and do not contain errors.

The discussion section would benefit from stronger synthesis and less repetition. At several points, the paper restates results rather than interpreting them more deeply. In addition, some claims appear stronger than what the descriptive data alone can support. The qualitative excerpts are useful, but some are too long and should be reduced to improve flow and analytical focus.

The CONCLUSION or summary is accurate and supported by the content.

The conclusion is broadly consistent with the findings and appropriately emphasizes the gap between positive beliefs about inquiry-based learning and limited confidence in practice. The recommendations are relevant and practical. Still, the conclusion would be stronger if it were more concise, less repetitive, and more explicitly tied to the study's specific evidence and limitations.

The list of REFERENCES is comprehensive and appropriate.

The references are generally relevant to the topic and include important sources on inquiry-based learning, teacher beliefs, and mixed methods.

Please rate the TITLE of this paper.

[Poor] 1-5 [Excellent]

5

Please rate the ABSTRACT of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the LANGUAGE of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the METHODS of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the RESULTS of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the CONCLUSION of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the REFERENCES of this paper.

[Poor] 1-5 [Excellent]

5

Overall Recommendation!!!

Return for major revision and resubmission

Comments and Suggestions to the Author(s):

This manuscript addresses a relevant and timely issue in teacher education, particularly the extent to which pre-service teachers value inquiry-based learning and the barriers they perceive when attempting to implement it. The topic is worthwhile, and the mixed-method design has the potential to offer meaningful insights. The qualitative themes are especially useful in illustrating the tension between positive beliefs and practical difficulty. Nonetheless, it requires minor revision in:

-language: concision, precision

-methodology: the integration between the quantitative and qualitative strands should be explained more explicitly; the absence of inferential statistics should be addressed explicitly

-discussion: the quantitative analysis appears limited in relation to the claims made. Discourse should be managed so that the claims are made more subtly and with more analytical interpretation.

The manuscript is not yet ready for acceptance, but it could become a stronger contribution after revision. The most urgent issues are language editing, clearer explanation of instrument adaptation and mixed-method integration, and tighter alignment between the stated objectives and the actual analyses reported.

Reviewer F:

Recommendation: Accept Submission

The TITLE is clear and it is adequate to the content of the article.

The title, "Pre-Service Teachers' Beliefs, Difficulties and Practices Toward Inquiry-Based Learning: A Mixed-Method Approach" is adequate, in alignment with the content of the article, helps the readers to immediately understand the topic under discussion, and casts light of the issue(s) treated further down in the paper.

By reading the title, either being a researcher in teacher education courses or a practicum mentor, you could instantly understand what the article might be about.

The ABSTRACT clearly presents objectives, methods, results, and conclusions.

The abstract states the objectives clearly, it outlines research methods, (quantitative & qualitative methods, research instruments and the results to be expected. Benefits and significance of the study unfolds as you keep reading the abstract. Recommendations for the efficient implementation of IBL are highlighted in the abstract. It is mentioned that practicum experiences involve hands-on teaching practice in real classroom settings. It is also mentioned that the article is significant in dealing with the local educational reform. Key words also serve as indicators for the general perceptiveness of the study.

There are a few grammatical errors and spelling mistakes in this article.

In my opinion, there were no grammatical errors or spelling mistakes in this article. The authors have used Grammarly for the purpose of language editing and grammatical correction.

The study METHODS are explained clearly.

The study Methods, research respondents and research instruments are explained clearly. The thorough explanation of the 3 Variables: pre service teachers' beliefs, practices and difficulty in implementation are measured by convergent mixed-methods approach, which integrates quantitative trends with qualitative narratives. This article uses not only main questions but also probing questions, the realization of research objectives is completed through a combination of quantitative and qualitative research, and in depth interviews and focus group discussions.

The results are clear and do not contain errors.

The results are clear, do not contain errors. They are elaborate, transparent and provide a detailed and comprehensive overview of the entire article. Recommendations are provided by them, leading to the need for further support evidence, to the idea that although pre-service teachers acknowledge the benefits of IBL, implementation is still difficult due to contextual flaws, lack of expertise, and need for specialized assistance and hands on experience.

The CONCLUSION or summary is accurate and supported by the content.

The summary is accurate. It is supported by the content of the whole research conducted. Arguments and discussion go hand in hand, complementing the overall content of the research paper. The discussion of the final findings is growing and is very detailed. The summary highlights the difficult nature of IBL adoption, the need for mentorship assistance from more experienced practitioners of IBL, and for curriculum reformation.

The list of REFERENCES is comprehensive and appropriate.

The list of references is appropriate for educational research related to inquiry-based learning and science education, they are contemporary and detailed.

The reference formatting follows APA style conventions, though it is numbered. The list of references is from reputable journals and recent years, indicating they are relevant and current.

Please rate the TITLE of this paper.

[Poor] 1-5 [Excellent]

5

Please rate the ABSTRACT of this paper.

[Poor] 1-5 [Excellent]

5

Please rate the LANGUAGE of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the METHODS of this paper.

[Poor] 1-5 [Excellent]

5

Please rate the RESULTS of this paper.

[Poor] 1-5 [Excellent]

4

Please rate the CONCLUSION of this paper.

[Poor] 1-5 [Excellent]
5

Please rate the REFERENCES of this paper.

[Poor] 1-5 [Excellent]
5

Overall Recommendation!!!
Accepted, no revision needed

Comments and Suggestions to the Author(s):

It is a paper that will contribute to further education of pre service teachers, its content appears appropriate for academic work related to education research, inquiry-based learning, and teaching methods.

Reviewer G:
Recommendation: Accept Submission

The TITLE is clear and it is adequate to the content of the article.

The title is clear, specific, and aligned with the study content.

Suggestion: to include the specific research group in the secondary title.

The ABSTRACT clearly presents objectives, methods, results, and conclusions.

Meets the criterion, but could be more concise. It also contains a few grammatical errors. It is a bit wordy. Try to modify to make it more concise including objectives, methods, results, and conclusions.

There are a few grammatical errors and spelling mistakes in this article.

Minor inconsistencies in tense and article usage. In addition, wordiness and repetition can be noticed. It needs to be reviewed again by the author.

The study METHODS are explained clearly.

Methods section is detailed and generally well-structured.

The results are clear and do not contain errors.

It is clearly presented. Proper use of descriptive statistics. Good alignment between quantitative and qualitative findings

The CONCLUSION or summary is accurate and supported by the content.

The conclusions are well-supported by the results

The list of REFERENCES is comprehensive and appropriate.

The reference list is generally comprehensive. It needs to be reviewed by the author. Some formatting errors. (such as, punctuation, spacing, capitalization, italics) . For instance, when it is a journal name, the name of journal is not given in italics in some cases. Have a look at the reference list again to follow APA guidelines.

Please rate the TITLE of this paper.

[Poor] 1-5 [Excellent]
5

Please rate the ABSTRACT of this paper.

[Poor] 1-5 [Excellent]
3

Please rate the LANGUAGE of this paper.

[Poor] 1-5 [Excellent]
4

Please rate the METHODS of this paper.

[Poor] 1-5 [Excellent]
5

Please rate the RESULTS of this paper.

[Poor] 1-5 [Excellent]
5

Please rate the CONCLUSION of this paper.

[Poor] 1-5 [Excellent]
5

Please rate the REFERENCES of this paper.

[Poor] 1-5 [Excellent]
4

Overall Recommendation!!!

Accepted, minor revision needed

Comments and Suggestions to the Author(s):

Some sections (especially Introduction, Methods, and Conclusion) are overly long and repetitive. In the results sections, avoid interpretation repetition across sections. In addition, try to modify the reference list according to APA GUIDELINES. Minor mistakes are in the list.
