

## COVER LETTER

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Dear Prof. Dr. H. Zulkardi, M. I. Komp., M. Sc.,

We wish to submit an original research article entitled "Comparing Model-Building Process: A Model Prospective Teachers Used in Interpreting Student's Mathematical Thinking" for consideration by Journal on Mathematics Education (IndoMS-JME).

We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

In this paper, we report on / show that comparing model-building process proposed by Wilson, Lee, and Hollebrands (2011) is still applicable and we distinguished it in two different types according to the use of representation in interpreting students' mathematical thinking. This is significant because the evidence of prospective teachers' interpretation can be used to assess the progress of mathematical understanding and harmonize learning in teacher education programs in a sustainable manner by supporting and developing effective learning.

We believe that this manuscript is appropriate for publication by Journal on Mathematics Education (IndoMS-JME) because it is in accordance with journals' aim and scope, Mathematics Education.

The goal of this study was to gain the description of prospective teacher used model of building process in interpretation students' mathematical thinking. As suggested by literature review, the existing literature in interpreting students' mathematical thinking is relatively sparse. In trying to better understand the model prospective teacher use in interpreting students' mathematical thinking, we find that comparing model-building process proposed by Wilson et al. (2011) is still applicable today.

This study has attempted to distinguish detailed comparison models based on representations that are used as a basis for prospective teachers to provide interpretations of students' mathematical thinking. We find that comparing model-building process in interpreting students' mathematical thinking can be distinguished as two types, i.e. comparing work and comparing knowledge. The distinction between these two types of comparing model is based on the prospective teacher's implicit or explicit attention to the student's work and the analysis performed. Comparing work does an analysis by considering the external representation rubric by comparing the work of students with the results of their own work in solving the same problem. Whereas Comparing knowledge analyzes by considering the internal representation rubric by comparing students' work with the knowledge they have about the problem.

Prospective teachers use the rubric as a guideline to determine their interpretation of students' mathematical thinking. The rubric is different for both groups of prospective teachers. Comparing work groups use the external representation rubric while the comparing knowledge group uses internal repetition rubrics in the analysis to obtain interpretations of students' mathematical thinking. In the comparing work, prospective teachers completed BCP in written. While in the comparing knowledge, prospective teachers did not. They used their knowledge to analyze students' strategies or students' mathematical thinking but didn't express it in writing. The characteristics of the interpretation of the two groups are relatively same, which emphasizes the concern about the operations performed or allegedly done by the students, students' mistakes, and the assessment of students' understanding. Representation is the basis for determining the model of interpretation of prospective teachers. External representations are used by the compare works group, while internal representations are used by groups of comparing knowledge. The evidence of interpretations of prospective teachers can be used to assess the progress of mathematical understanding and harmonize learning in teacher education programs in a sustainable manner by supporting and developing effective learning.

We have no conflicts of interest to disclose.

Please address all correspondence concerning this manuscript to me at [sapti@umpwr.ac.id](mailto:sapti@umpwr.ac.id).

Thank you for your consideration of this manuscript.

Sincerely,



Dr. Mujiyem Sapti, M.Si