



Profile of Teacher Decision-Making in Designing Mathematical Tasks Based on Teaching Experience

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ABSTRACT

Objective: This research aims to describe the decision-making profile of mathematics teachers in designing mathematical assignments based on teaching experience. **Method:** The subjects of this study were mathematics teachers in junior high school education units with a bachelor's degree in mathematics education, including one senior teacher (ST) and one novice teacher (NT). The researcher used a task sheet for making a mathematical task design (TSMTD) and an interview guide as instruments for data collection. **Results:** The results showed that both novice and senior teachers identified problems by mentioning known information, but novice teachers tended to modify textbook assignments as materials for designing questions. In collecting information, beginner and senior teachers compared ideas from previous experiences, but senior teachers considered the context of the questions to be designed. Beginner teachers submitted problems by raising the theme of comparing values and transforming values with different resolution processes, while senior teachers considered several contexts and chose multiple alternative solutions. Both beginner and senior teachers checked all the questions designed and assessed the feasibility of the solutions generated from the task. **Novelty:** This research contributes to the understanding of the decision-making profile of mathematics teachers in designing assignments based on their teaching experience, highlighting the differences between novice and senior teachers in terms of problem identification, information collection, problem submission, and checking of designed questions.

INTRODUCTION

For constructivists, teaching is not merely an activity of transferring knowledge but an activity that allows students to construct their knowledge. Teaching means participation with students in constructing knowledge, making meaning, seeking clarity, being critical, and providing justification. Suparno (1997) reveals that teaching is a form of self-learning. So, teaching in this context is helping someone think correctly by letting him think for himself.

Based on this understanding, a teacher should know how to teach teaching material to his students. Learning, which is an effort to direct students to reach aspects of syntactical and substantive content, will only be achieved with knowledge of teaching strategies that are applied appropriately by the teacher. Teachers who want to teach mathematics effectively must know more than just about the content to be taught and some ways of teaching it (Cevikbas & Kaiser, 2020; Deng et al., 2020; Hill & Uribe-Florez, 2019; Oldknow et al., 2019; Wei et al., 2020). The teacher must also understand and be able to integrate content knowledge into knowledge about curriculum, learning, teaching, and students. This knowledge can ultimately guide teachers to tailor learning situations to the needs of individual and group students.

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