

## **STUDENTS' PEDAGOGICAL AND CONTENT KNOWLEDGE (PCK) ON PROBLEM SOLVING HEURISTICS: BASIS FOR THE DEVELOPMENT OF TRAINING MODULE**

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### **ABSTRACT**

This descriptive research aimed to determine the level of pedagogical and content knowledge (PCK) on problem-solving heuristics as a basis in developing a training module based on the least-learned competencies in problem-solving Heuristics. The respondents were the pre-service teachers who have taught mathematics subjects during their practice teaching school year 2018-2019. Purposive sampling was employed. The result showed that BSED math majors have low while the BEED have very low knowledge of problem – solving Heuristics. The most common strategy used by the pre-service teachers in solving problems were algebraic approach or using equation, making an organized list and drawing a diagram. In terms of Pedagogical Content Knowledge, the BSED has low pedagogical knowledge, high content knowledge, and average pedagogical content knowledge while the BEED has low pedagogical knowledge, average content knowledge, and low pedagogical content knowledge on problem-solving Heuristics. This means that the BSED and BEED's conceptual and procedural knowledge on solving problems are acceptable and below acceptable levels respectively. As a whole, the pre-service teachers have low pedagogical knowledge, average content knowledge, and low pedagogical content knowledge on problem-solving Heuristics. Knowledge of content and pedagogy has a significant role during the teaching and learning process. Thus, the pre-serve teachers must have the deep mathematical understanding and adequate conceptual and procedural knowledge of the different problem-solving Heuristics so that they can transmit this to their students when they are in the field.

*Keywords:* Pedagogical and Content Knowledge, Problem-solving Heuristics, Philippines