

# Supporting Pre-Service Foundation Phase Teachers' Mathematics Word Problem-Solving Instruction Through A Lesson Study Intervention Approach

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## **Abstract**

Mathematics word problem-solving is a facet of mathematics education that is feared by both teachers and learners. Teachers are intimidated to teach mathematics word problems. The result is that teachers steer away from teaching word problems to learners. This paper reports on how the lesson study approach is used to guide second year pre-service foundation phase teachers through mathematics word problem solving instruction. This research is underpinned by Desimone's (2009) core conceptual framework for professional development. This multiple case study research highlights pre-service teachers' beliefs and attitude towards mathematics word problem solving. The lesson study approach guided pre-service teachers through the finer nuances of mathematics word problem solving. Theoretical aspects such as reading comprehension, play-based learning and understanding the mathematics register were highlighted. Practically, pre-service teachers were allowed the opportunity to experiment with effective teaching practices to improve their mathematics word problem solving instruction. Data was generated using observation checklists, video recording of lessons taught, along with a collaborative group discussion. Data analysis was done through inductive thematic analysis. The importance of reflection is highlighted through the paper. This paper reports on the value of the lesson study approach, how important professional development is for pre-service teachers and how pre-service teachers' opinion towards mathematics word problems have changed after they gained a better understanding of what mathematics word problem solving entails.

**Keywords:** mathematics word problem-solving instruction, lesson study approach, professional development, play-based learning, teaching and learning