

MATHEMATICS COACHES: THEIR PREPAREDNESS TO TEACH MATHEMATICS USING A PROBLEM-SOLVING APPROACH

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Abstract: *The New Standards-Based Mathematics Curriculum (NSC) of the Jamaican education system, like many mathematics curricula in other countries, has as one of its core objectives to engage learners in Science, Technology, Engineering and Mathematics (STEM) education. Problem solving is a key component of these STEM areas. Through its annual staging of the Grade 9 Mathematics Problem-solving Competition, the School of Education at The University of the West Indies (UWI), Jamaica interfaces with secondary school students and their mathematics coaches. In assessing students' solutions to the mathematics problems posed during the competition, the level of preparation of participants for the competition became a concern. This research therefore investigated mathematics coaches' descriptions of a problem-solving approach to teaching and learning mathematics and perceptions of preparedness to use a problem-solving approach to teach mathematics. It further explored how mathematics coaches guide students through the problem-solving process and what problem-solving strategies are taught by these coaches. A survey research design involving 31 mathematics coaches was used for the research. Both quantitative and qualitative data were collected using a questionnaire. The findings revealed that although the mathematics coaches (who are classroom teachers) feel confident that they are able to teach mathematics using a problem-solving approach, they do not appear to have the requisite knowledge and skills to effectively teach mathematics using a problem-solving approach. The findings suggest that there is a need for trainers of teachers to evaluate and strengthen their programmes on aspects of problem solving for mathematics teaching and learning.*

Keywords: *mathematics, problem solving, mathematics coaches, teaching, STEM*

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