



Wednesday, 22nd January 2014
1.00 - 2.00
MR 317

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An Application of the Theory of Planned Behaviour to Predict Teachers' Intentions to adopt Mathematical Problem Solving: A Mixed Method Study

In today's world, the advances of technology have rendered the emphasis on computational, algorithmic and procedural skills in school mathematics undesirable. Students are now required to learn to apply what they have learned to new situations instead of memorizing and reciting facts, rules and rote procedures without understanding them. As a result, the current reform-oriented vision for mathematics education is the use of problem solving as a basic thinking and pedagogical tool to stimulate increased understanding and prepare students to apply their knowledge in innovative ways. However, several researchers have opined that teacher beliefs are precursor to change and that the teacher is the crucial change agent in education reforms. Thus, teachers' beliefs about problem solving in mathematics (or Mathematical Problem Solving, MPS) may play a significant role in its implementation. As beliefs influence intentions, the primary purpose of this study is to examine the social psychological determinants of teachers' intentions to adopt MPS behaviour in their mathematics instructions.

Ajzen's (1991) Theory of Planned Behaviour will be used to assess the potential influences of three belief-based constructs, namely, attitude, subjective norm and perceived behavioural control. Salient beliefs about MPS behaviour will first be identified to develop scales (i.e. questionnaires) to measure the theory's primary constructs. Using an explanatory mixed method approach, an initial sample of 463 primary teachers from the Sekondi-Takoradi Metropolis in the Western Region of the Republic of Ghana will be used as respondents to the questionnaires in the quantitative phase. A further sample of 8-20 teachers who responded to the questionnaire will be interviewed in the qualitative phase using Yin's (2009) multiple case study approach. The study is expected to provide specific suggestions, including professional development strategies, for addressing teachers' beliefs about MPS behaviour.



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