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Education

"NOW I HAVE A PLACE IN MY CLASS": OUTCOMES OF AN ACTION RESEARCH STUDY OF IMPROVING MATHEMATICS ACHIEVEMENT

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This paper is based on a collaborative action research study conducted to improve mathematics achievement of Grade 10 students in four schools located in Kandy District. A team of researchers from the University of Peradeniya collaborated with five mathematics teachers in four schools to conduct action research studies in their classrooms over a six months time period. The objectives of the study were as follows: 1). to assess the reasons for differences in mathematics achievement of students in Grade 10 classes of selected schools; 2), to develop appropriate collaborative interventions to improve mathematics achievements of students; 3). to evaluate the outcomes which are resulted from the interventions adopted by teachers. Collaborative action research methodology adopted in this study helped the research team to analyse students' weaknesses at school and classroom levels. The concepts and action research methodology was introduced to the teachers in the first workshop and subsequent workshops were used to review and share experiences of teacher interventions. Quantitative and qualitative data were generated using interviews, classroom observations, reflective journals maintained by the teachers and school and classroom records. The teachers made a concerted effort to identify the students' weaknesses in mathematics and had used innovative teaching methods, improved pupil teacher interactions, and paid attention to individual students in their interventions. Teachers reported that overall achievements of students were improved and the majority of students developed favorable attitudes towards learning mathematics. Improved achievements in mathematics also created new identities for some students as indicated in the title of this abstract. Teachers also reported that their capacities for identifying and analyzing classroom problems, planning interventions and reflective thinking had been improved. The freedom given to the teachers in this project to make decisions about teaching unleashed the creative potentials of teachers and improved motivation of them to use more students' centered creative methods in their classrooms. Those innovative strategies identified and implemented by the teachers in turn induced creativity and motivation among their students. Within a very short period of few months, considerable number of students had been able to improve their achievements, identities and attitudes towards mathematics.

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