

Teaching Behaviours of Effective Secondary Mathematics Teachers: A Study in Dhaka, Bangladesh

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Abstract : Despite significant progress in access, equity and public examination success, poor student performance in mathematics in secondary schools has become a major concern in Bangladesh. A substantial body of research has emphasised the important contribution of teaching practices to student achievement. However, this has not been investigated in Bangladesh. Therefore, the study sought to find out the effectiveness of mathematics teaching practices as a means of improving secondary school mathematics in Dhaka Municipality City (DMC) area, Bangladesh. The purpose of this study was twofold, first, to identify the 20 highest performing secondary schools in mathematics in DMC, and second, to investigate the teaching practices of mathematics teachers in these schools. A two-phase mixed method approach was adopted. In the first phase, secondary source data were obtained from the Board of Intermediate and Secondary Education (BISE), Dhaka and value-added measures used to identify the 20 highest performing secondary schools in mathematics. In the second phase, a concurrent mixed method design, where qualitative methods were embedded within a dominant quantitative approach was utilised. A purposive sampling strategy was used to select fifteen teachers from the 20 highest performing secondary schools. The main sources of data were classroom teaching observations, and teacher interviews. The data from teacher observations were analysed with descriptive and nonparametric statistics. The interview data were analysed qualitatively. The main findings showed teachers adopt a direct teaching approach which incorporates orientation, structuring, modelling, practice, questioning and teacher-student interaction that creates an individualistic learning environment. The variation in developmental levels of teaching skill indicate that teachers do not necessarily use the qualitative (i.e., focus, stage, quality and differentiation) aspects of teaching behaviours effectively. This is the first study to investigate teaching behaviours of effective secondary mathematics teachers within Dhaka, Bangladesh. It contributes in an international dimension to the field of educational effectiveness and raise questions about existing constructivist approaches. Further, it contributes to important insights about teaching behaviours that can be used to inform the development of evidence-based policy and practice on quality teaching in Bangladesh.

Keywords : effective teaching, mathematics, secondary schools, student achievement, value-added measures

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