Teacher Practices in the Mathematics Classroom Following Professional Learning and Development: Association with Student Outcomes

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Equity is one of the most complex and pressing issues related to mathematics education both in New Zealand and internationally. In multi-cultural societies, the cultural mismatch of students and the educational environment in which they learn has been suggested as a reason for the reported gaps in student academic outcomes (Stephens et al., 2012). Rather than take a deficit approach, attention on student strengths (Burack et al., 2017) is needed and a has been adopted as a key foundation of Developing Mathematical Inquiry Communities (DMIC) professional learning and development. The programme focuses on ambitious practices and culturally sustaining pedagogy to shift student outcomes (Hunter et al., 2018). We will present findings of a project exploring the frequency of use of DMIC pedagogical practices in the classroom, teacher confidence, and self-reported teaching proportions of mathematical strands. We relate these findings to student outcomes of mathematical achievement, wellbeing, and engagement. A key finding is that both changes in teacher practice and student outcomes were noted after involvement over an extended period of time (4 years) in the DMIC professional learning and development programme.

References

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