Opportunities for learning mathematics in a newly established Innovative Learning Environment (ILE).

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Abstract

There is currently an increasing movement towards the implementation of Innovative Learning Environments (ILEs) in primary schools across New Zealand, advocated by the Ministry of Education. This ILE implementation has been met with both support and opposition from the public and educators alike. Simultaneously, mathematics education in New Zealand is undergoing reform, with research informing changes from traditional transmission-style approaches to those that place students at the centre and promote mathematical understandings in communities of learning. Reforms in how students learn mathematics are well-aligned to the skill sets promoted as reflecting the competencies required of 21st century learners. However, the paucity of research into opportunities for students learning mathematics in ILEs warrants the need for further research.

Using a qualitative methodology and single case study design, this research explored the opportunities afforded to Year 7 and Year 8 students when learning mathematics in a newly established ILE. Throughout Term 2, 2018, data collected from one-to-one teacher interviews, classroom observations, and student focus group discussions were coded, analysed, and triangulated. Four salient themes emerged from the data: the affordances of spatial arrangement, opportunities for student agency, students leading the learning, and the ILE as a mathematics community of learners. Teacher and student participants reported space within the ILE opened opportunities for individual and collaborative mathematics learning. The increased affordance of student voice and choice positioned students as the central drivers in both the leading and learning of mathematics. The open, fluid, and flexible spaces within the ILE presented increased opportunities for varied grouping structures. When combined with new co-planning and teaching arrangements, teachers and students considered that opportunities to learn involved greater options for mathematical challenge and multiple perspectives on mathematics.

This research study presents mathematics learning within an ILE through the voices of the participants, particularly the student participants. It provides insights into the set up and spatial qualities afforded within the ILE, ways students described their

mathematical learning opportunities, and comparisons they made to their previous single-space learning environments. Teacher and student participants in this research were very supportive of the ILE arrangement and the opportunities for learning mathematics that it afforded.

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