

UNPACKING DISAFFECTED STUDENTS' METAPHORS FOR MATHEMATICS LEARNING

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Students' earliest memories of mathematics in school often involve playing with numbers and identifying geometric forms. But as they progress through the grades, many face obstacles and become less motivated to learn math. This paper examines the metaphors for learning mathematics produced by disaffected students and considers whether these metaphors can serve as a resource for identifying ways to improve students' experiences and relationships with mathematics.

Scholars have used diverse approaches to explore students' conceptions and attitudes toward mathematics learning (Hannula, 2014). Our study used qualitative thematic analysis (Braun & Clarke, 2006) to study meaning patterns in interview responses to an open-ended prompt ('learning mathematics is like...') from over 100 Kindergarten to Grade 12 students, focusing on responses from those we identified as disaffected. Three themes were generated: learning math as path following; learning math as rule following; and learning math as emotional control. The findings indicate that some disaffected students interpret mathematics learning as a process that is externally constrained, a view also documented by Latterell and Wilson (2017), while others recognize their agency. These findings serve to enhance our understanding of students' experiences in classrooms, and point to possible pedagogical strategies to address students' perceived concerns, such as examining students' metaphors with them and exploring ways to address feelings of loss of control and emotional discomfort.

For researchers, we suggest that analysis of student metaphors for learning mathematics is an undervalued technique. In these times of restrictions on access to schools for (new) data collection, it is also one that does not necessarily need focused data collection and could potentially be applied to already-existing datasets if those materials contain free-flowing interviews on topics relating to student or teacher learning.

References

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