Title:

How do Interactive White Boards Affect Participation in the Mathematics Classroom?

Abstract:

Interactive whiteboards (IWBs) have become common fixtures in mathematics classrooms around the world. They have provided new opportunities for educators to impart learning upon students. Drawing on Stephen Hegedus’ and William Peneul’s work on participation structures with SimCalc MathWorlds™, this research study examines the effect IWBs have on participation structures within the mathematics classroom. Specifically, the objective of this research was to determine if IWBs can elicit participation and engagement amongst students. To accomplish this, two Grade 9 mathematics classes in a Suburban Vancouver secondary school were videotaped and analyzed over six lessons (12 classes total) that incorporated IWBs. The videos were then analyzed to determine the impact the IWB had in creating participation structures and what challenges were encountered. The findings suggest that IWBs can positively affect participation by facilitating gestures, providing dynamic images that allow for students to visualize future movements, and encouraging student-student discussion.