Apr 9th, 9:00 AM - 10:00 AM

Being Smart about Smartboards: A Technological Pedagogical and Content Knowledge (TPACK) Analysis

Katie Dietrich
Illinois Wesleyan University

Leah Nillas, Faculty Advisor
Illinois Wesleyan University

Oral Presentation ES

BEING SMART ABOUT SMARTBOARDS: A TECHNOLOGICAL PEDAGOGICAL AND CONTENT KNOWLEDGE (TPACK) ANALYSIS

Katie Dietrich and Leah Nillas*
Educational Studies Department, Illinois Wesleyan University

Many educators have concerns that although interactive whiteboards are beneficial in their presentational and motivational aspects, they only have a "limited value in improving subject understanding" (Glover & Miller, 2009). This research study investigated that exact question – how the use of an interactive whiteboard (IWB) influenced students' learning, and what types of IWB-based activities facilitated students' mathematical understanding. Lessons were presented to high school Algebra students and relied heavily on various SmartBoard applications to convey the concepts. In turn, the effectiveness of the IWB was determined through observations, reflections, assessments, and student responses. This qualitative data was analyzed using the Technological Pedagogical and Content Knowledge (TPACK) framework (Mishra & Koehler, 2006). Results support that the use of an IWB improves students' understanding of mathematics. However, it is imperative that technical and school-wide support is widely available and that the teacher is trained in how to implement its applications appropriately.