

A Preliminary Illustration of Mathematical Inquiry Norms in a Primary Classroom

Katie Makar

The University of Queensland
k.makar@uq.edu.au

Jill Fielding-Wells

Australian Catholic University
jill.wells@acu.edu.au

Norms are cognitive and social structures that are negotiated explicitly and implicitly as expectations of appropriate behaviour in a mathematics classroom. Yackel and Cobb's (1996) classic work identified key social and socio-mathematical norms in a primary classroom. However, the problems used in this and subsequent research on norms in mathematics classrooms have primarily focused on well-defined problems with a single, correct answer and/or procedural efficiency. Problems addressed in mathematical inquiry often involve complex, ambiguous tasks with a method that is ill-defined and a solution that is assessed on the quality of evidence that students use to convince their audience. Mathematical inquiry norms are unique in that they often conflict with expectations developed implicitly in traditional classroom mathematics lessons. A study is underway that aims to identify norms used by primary teachers experienced with mathematical inquiry. An initial tentative set of diverse and complex norms has been developed through drawing on a database archive of classroom videos of mathematical inquiry lessons from the authors' previous research. In this presentation, we provide a short excerpt from a primary classroom video to illustrate a subset of identified norms that engage with social, dispositional, mathematical and inquiry-based expectations in a classroom as students address a mathematical inquiry question.

Yackel, E., & Cobb, P. (1996). Sociomathematical norms, argumentation, and autonomy in mathematics. *Journal for Research in Mathematics Education*, 27(4), 458–477.

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