Authority in the Negotiation of Sociomathematical Norms

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Contributed Research Report

Keywords: authority, calculus, inquiry, sociomathematical norms

Abstract

The study of sociomathematical norms initiated by Yackel and Cobb (1996) has become a popular way to make sense of the complexity of mathematical activity in the classroom. Levenson, Tirosh, and Tsamir (2009) found that teachers and students did not share the same interpretations of teacher-initiated sociomathematical norms. In this study we explore the role authority plays in the negotiation and legitimization of student-initiated soiciomathematical norms. We found that mathematical authority legitimized through mathematical argument and justification played a major role in the negotiation of sociomathematical norms in an inquiry based, university honors calculus II course. We suggest creating an environment where students rather than teachers are encouraged to initiate and negotiate sociomathematical norms will lead to better agreement on the expectations. We also believe that if teachers introduce a sociomathematical norm, they should be aware of the potentially obstructive role their non-mathematical authorities may play in the negotiation process.