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Dimmel, Justin K.; Herbst, Patricio G.

What details do geometry teachers expect in students' proofs? A method for experimentally testing possible classroom norms.

Nicol, Cynthia (ed.) et al., Proceedings of the 38th conference of the International Group for the Psychology of Mathematics Education "Mathematics education at the edge", PME 38 held jointly with the 36th conference of PME-NA, Vancouver, Canada, July 15–20, 2014, Vol. 2. [s. 1.]: International Group for the Psychology of Mathematics Education (ISBN 978-0-86491-360-9/set; 978-0-86491-362-3/v.2). 393-400 (2014).

Summary: We report on the development and piloting of a method that provides a sufficient condition for confirming that an observed regularity in a classroom is a norm. The method we describe is a refinement of the breaching experiment technique that uses random assignment to experimental conditions as a means to facilitate controlled comparisons between participants' reactions to different episodes of instruction. We use this method to confirm the existence of normative ways that teachers scrutinize the details of proofs in geometry.

Classification: E50 G40

Keywords: proofs; proving; geometry; teachers' expectations