ZMATH 2015e.00250

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Assessing the effectiveness of classroom visual cues.

Dewar, Jacqueline M. (ed.) et al., Doing the scholarship of teaching and learning in mathematics. Washington, DC: The Mathematical Association of America (MAA) (ISBN 978-0-88385-193-7/pbk; 978-1-61444-318-6/ebook). MAA Notes 83, 51-58 (2015).

Summary: This chapter illuminates some of the research design issues discussed in [*J. M. Dewar*, ibid., 19–44 (2015; ME 2015e.00248)]. It shows how the authors developed and piloted a novel intervention, visual cues, during one semester and fully implemented and assessed it in another. The methodology involved two sections of the same course, taught by the same instructor, one as an experimental group and the other as control group. Because using visual cues to assist with some computational skills was specific and limited in scope, many of the concerns mentioned about using control groups in [loc. cit.] did not arise. The study involved similar interventions with visual cues in two different settings (first in remedial math, then in calculus). For calculus, the authors discovered that they had to alter their rubric to capture the information they wanted.

Classification: D20 D45 C75 F55 I45
Keywords: scholarship of teaching and learning; universities; research design; teaching methods; approach; assessment; teaching-learning processes; educational diagnosis; didactics of mathematics; powers; exponent rules; visualization; derivative rules; algebra; calculus; experimental teaching