ZMATH 2016e.00294

Coupland, Mary; Dunn, Peter K.; Galligan, Linda; Oates, Greg; Trenholm, Sven

Tertiary mathematics education.

Makar, Katie (ed.) et al., Research in mathematics education in Australasia 2012–2015. Singapore: Springer (ISBN 978-981-10-1417-8/pbk; 978-981-10-1419-2/ebook). 187-211 (2016).

Summary: Mathematical and statistical education research relevant to students in tertiary settings is reviewed. This is an expanding field and is evolving as researchers shift their attention from the reporting of innovations in lecturing practice and course design to include a deeper consideration of the experiences of educators and learners in this space. The purposeful inclusion of group work and discussion, focus on concepts, authentic problem solving, interactions in lectures with student response systems and online learning are all changing the way mathematics and statistics are taught at this level. The authors note that traditional measures of achievement in the form of exam marks are still relied upon, and call for theory-based and theory-building research including investigations of depth of understanding, and of transfer of knowledge and skills to new situations. An emphasis on the learner's experience and the employment of cross-disciplinary teams of researchers are further suggestions.

Classification: D20 D35 K15 U75
Keywords: undergraduate mathematics; statistics education; digital technology in learning mathematics and statistics
doi:10.1007/978-981-10-1419-2_10