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Searching for Fuller Rather than Partial Truths: Transdisciplinarity in Mathematics Education Research

In 2006, the National Mathematics Advisory Panel (NMAP) was formed to analyze existing “scientific” research and make recommendations based on the research on ways in which to improve mathematical learning and instruction for American students. The NMAP report (2008) has resulted in significant controversy and critique, most specifically about the exclusive emphasis on experimental research and randomized trials as the “gold standard” in terms of what counts as scientific evidence. The report states that in order to produce meaningful result results that have the potential to inform practice and improve education outcomes, “graduate programs in education and related fields should ensure attention to research design, analysis, and interpretation for teachers and those entering academic and educational leadership positions in order to increase the national capacity to conduct and utilize rigorous research” (p. 64). The NMAP report has resulted in “domain wars” between those that conduct experimental research (e.g., psychologists) and those that do not (e.g., mathematics education researchers). This paper explores the implications of “domain wars” in mathematics education research and argues that transdisciplinary preparation of researchers is necessary.