

ZMATH 2016f.00199

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If you're doubting yourself then, what's the fun in that? An exploration of why prospective secondary mathematics teachers perceive statistics as difficult.

J. Stat. Educ. 21, No. 3, 26 p., electronic only (2013).

Summary: Most research into prospective secondary mathematics teachers' attitudes towards statistics indicates generally positive attitudes but a perception that statistics is difficult to learn. These perceptions of statistics as a difficult subject to learn may impact the approaches of prospective teachers to teaching statistics and in turn their students' perceptions of statistics. This study is the qualitative component of a larger quantitative study. The quantitative study investigated the conceptual knowledge of and attitudes towards statistics of a larger group of prospective secondary mathematics teachers ($n = 134$). For the purposes of the present study, nine prospective secondary teachers, eight of whom were part of the larger study, were interviewed regarding their perceptions of learning and teaching statistics. This study extends our understandings garnered from the quantitative study by exploring the factors that contribute to the perception of statistics as being difficult to learn. The analysis makes explicit the tensions in learning statistics by highlighting the nature of thinking and reasoning unique to statistics and the somewhat ambiguous influence of language and context on perceptions of difficulty. It also provides insights into prospective teachers' experiences and perceptions of teaching statistics and reveals that prospective teachers who perceive statistics as difficult to learn avoided teaching statistics as part of their teaching practice field placement.

Classification: C29 K19 D79

Keywords: stochastics; university teaching; statistics; preservice teacher education; educational research; teacher attitudes; perceptions of difficulty; beliefs

<http://ww2.amstat.org/publications/jse/v21n3/leavy.pdf>