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A framework for assessing statistical knowledge for teaching based on the identification of conceptions of variability held by teachers.

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Summary: This article introduces a conceptual framework for statistical knowledge for teaching (henceforth SKT), which addresses some noted gaps identified in the research literature on statistics education. It is proposed that the use and adaptation – for the case of statistics – of the model of mathematical knowledge for teaching (henceforth MKT) developed by *D. L. Ball*, *M. Thames* and *G. Phelps* [“Content knowledge for teaching: what makes it special”, *J. Teach. Educ.* 59, No. 5, 389–407 (2008)], as well as an extension of that model – and of almost all the few conceptualizations of SKT proposed to date – addressing some of its limitations, may help to gain a deeper insight into the knowledge needed to teach statistics effectively. In the present chapter, the components of this new framework for SKT are elicited, identified, and described through a set of tasks that examine teachers’ conceptions of variability in diverse statistical contexts, as well as teachers’ subject matter and pedagogical content knowledge in relation to the statistical ideas involved in such tasks.

Classification: D20 C39 K49 K79 C29

Keywords: statistical knowledge for teaching; teacher knowledge; teachers’ beliefs; teachers’ conceptions of variability; assessment of statistical knowledge for teaching

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