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Bridging policy debates on risk assessments and mathematical literacy.

Ubuz, Behiye (ed.) et al., CERME 8. Proceedings of the eighth congress of the European Society of Research in Mathematics Education, Antalya, Turkey, February 6–10, 2013. Ankara: Middle East Technical University (ISBN 978-975-429-315-9). 819-828 (2013).

Summary: The aim of this paper is to generate discussions on why to develop mathematical literacy and critical thinking related to risk assessments and how. The paper presents ideas and key points from the academic literature on science for policy related to uncertainty and risk assessments. These are elaborated and exemplified. I further show that these match aspects of mathematical literacy and related literature on research in mathematics education. Perspectives from the two academic communities are then combined, resulting in a framework for increasing competences useful for public participation. The theoretical foundation of the framework constitutes the starting point for a series of future research questions and research projects.

Classification: K70 M40 M70 K40

Keywords: risk assessments; societal issues; critical democratic competence; mathematical modelling; statistical literacy