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Proof as a cluster concept.

Nicol, Cynthia (ed.) et al., Proceedings of the 38th conference of the International Group for the Psychology of Mathematics Education “Mathematics education at the edge”, PME 38 held jointly with the 36th conference of PME-NA, Vancouver, Canada, July 15–20, 2014, Vol. 5. [s. 1.]: International Group for the Psychology of Mathematics Education (ISBN 978-0-86491-360-9/set; 978-0-86491-365-4/v.5). 353-360 (2014).

Summary: Proof is a central concept in mathematics education, yet mathematics educators have failed to reach a consensus on how proof should be conceptualized. I advocate defining proof as a clustered concept, in the sense of *G. Lakoff* [Women, fire, and dangerous things. Cambridge, UK: Cambridge University Press. (1987)]. I contend that this offers a better account of mathematicians’ practice with respect to proof than previous accounts that attempted to define a proof as an argument possessing an essential property, such as being convincing or deductive. I also argue that it leads to useful pedagogical consequences.

Classification: E50 D20 E20

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