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How the knowledge of algebraic operation relates to prospective teachers' teaching competency: an example of teaching the topic of square root.

Liljedahl, Peter (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. 4. [s. 1.]: International Group for the Psychology of Mathematics Education (ISBN 978-0-86491-360-9/set; 978-0-86491-364-7/v.4). 97-104 (2014).

Summary: This study is the part of a larger study on investigating Hong Kong (HK) prospective teachers' (PTs) Subject Matter Knowledge (SMK) and Pedagogical Content Knowledge (PCK). In this paper, five HK PTs' SMK and PCK on teaching one topic regarding square root were investigated. The results suggest that insufficient understanding on the concept of algebraic operation is the major obstacle to limit those student teachers from teaching students with mathematical understanding. The results further echo with the viewpoint that SMK and PCK are two interrelated constructs and rich SMK leads to high quality of PCK.

Classification: F59 H19 D39 C39

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