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Prospective middle school teachers' knowledge in mathematics and pedagogy for teaching – the case of fraction division.

Woo, Jeong-Ho (ed.) et al., Proceedings of the 31st annual conference of the International Group for the Psychology of Mathematics Education, PME, Seoul, Korea, July 8–13, 2007. Vol. 1-4. Seoul: The Korea Society of Educational Studies in Mathematics. Part 3, 185-192 (2007).

Summary: In this paper, we investigated the extent of knowledge in mathematics and pedagogy that prospective middle school teachers have learned and what else they may need to know for developing effective classroom instruction. We focused on both prospective teachers' (PT) own perceptions about their knowledge in mathematics and pedagogy and the extent of their knowledge on the topic of fraction division. The results reveal a wide gap between these PT's general perceptions/confidence and their limited knowledge in mathematics and pedagogy for teaching, as an example, fraction division. The results also suggest that PTs need to master specific knowledge in mathematics and pedagogy for teaching in order to build their confidence for classroom instruction.

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