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‘To chunk or not to chunk’: learning division, the why before the how or vice versa.

Adams, G. (ed.), Proceedings of the British Society for Research into Learning Mathematics (BSRLM). Vol. 35, No. 3. Proceedings of the day conference, University of Reading, UK, November 7, 2015. London: British Society for Research into Learning Mathematics (BSRLM). 126-131 (2016).

Summary: In this small-scale study, I focus on the mathematical area of division (particularly the chunking and standard algorithms). The study takes place in a larger than average-sized, state-funded primary school in the south-west of England where the percentage of free school meals is lower than the national average. For one group of 17 low achieving students, having been taught chunking and getting confused, the standard method for short division was taught successfully. Six months later, when given free choice every child chose the standard method and they got the questions correct. 9 higher achieving students were taught chunking successfully but not taught the standard method. Six months later, given a free choice, they were still using the chunking method successfully. With the current focus on fluency and mastery, I am interested in whether there is a need for pupils to learn ‘why’ before ‘how’ (conceptual or procedural) or vice versa.

Classification: F32 D32

Keywords: primary education; educational research; division; written arithmetic; standard method; chunking; comparative studies; low-achieving students; higher-achieving students

<http://www.bsrlm.org.uk/IPs/ip35-3/BSRLM-IP-35-3-22.pdf>