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**Supporting variation in task design through the use of technology.**

Leung, Allen (ed.) et al., Digital technologies in designing mathematics education tasks. Potential and pitfalls. Cham: Springer (ISBN 978-3-319-43421-6/hbk; 978-3-319-43423-0/ebook). Mathematics Education in the Digital Era 8, 239-257 (2017).

Summary: This chapter describes a digital intervention for algebraic expertise that was built on three principles, crises, feedback and fading, as described by *C. Bokhove* and *B. Drijvers* [Technol. Knowl. Learn. 17, No. 1–2, 43–59 (2012; ME 2012f.01119)]. The principles are retrospectively scrutinized through Marton's Theory of Variation, concluding that the principles share several elements with the patterns of variation: contrast, generalisation, separation and fusion. The integration of these principles in a digital intervention suggests that technology has affordances and might be beneficial for task design with variation. The affordances in the presented technology comprise (i) authoring features, which enable teacher-authors to design their own contrasting task sequences, (ii) randomisation, which automates the creation of a vast amount of tasks with similar patterns and generalisations, (iii) feedback, which aids students in improving students' learning outcomes, and (iv) visualisations, which allow fusion through presenting multiple representations. The principles are demonstrated by discussing a sequence of tasks involving quadratic formulas. Advantages and limitations are discussed.

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