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Self-adapting the success rate when practicing math.

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Summary: Use and benefits of the possibility to choose a success rate are studied in a math-practice application that is used by a considerable percentage of Dutch primary school children. Study 1 uses data that were collected with the application, using children's practice data ($N = 40,329$; grades 1–6). Children differed in their preference for a high, medium, or low success rate. Preferences were associated with gender, age, and ability, matching expectations that follow from the literature. Study 2 is an experimental study with 192 children from grades 3–6, using a pretest, training phase, and posttest. The possibility to choose a success rate was manipulated. Unexpectedly, beneficial effects for math practice, improvement of math skills, and self-belief concerning math were absent. Results suggest an appreciation of the possibility to choose, although beneficial effects of choosing were not observed for motivation to practice, skill improvement, and self-belief concerning math.

Classification: C30 C20 U70

Keywords: computer-adaptive testing; self-adaptive testing; math practice; primary school

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