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**Cornerstone mathematics: designing digital technology for teacher adaptation and scaling.**

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Summary: We report the results of a design-based research project in England that embeds digital technology. The research followed from two phases in the USA: (1) a design phase that used dynamic representations to foster conceptual understanding of hard-to-teach mathematical ideas, and (2) a research phase that measured the efficacy of the resulting technology-based curriculum units as implemented in Texas schools. The goal of the third phase in England was initially to “scale up” the US approach. We determined, however, that the materials had to be re-designed for adaptability by English teachers. We report how the features of the innovation – particularly its technological infrastructure – could be leveraged, not only to achieve positive learning outcomes, but also to lay the foundations for change in pedagogy and learning at scale. We identify an emergent framework of design affordances for teacher adaptability that are particularly salient when technology is a critical element.

*Classification:* U70 U50 D30 R30

*Keywords:* digital technology; dynamic representations; technology-based curriculum

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