Isolating the “Tech” from EdTech: Experimental Evidence on Computer Assisted Learning in China

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Abstract

Recent studies of supplemental computer assisted learning (CAL) interventions have consistently found large positive effects, bolstering arguments for the rapid expansion of EdTech. In this paper, we develop a theoretical model to carefully explore the possible channels by which supplemental CAL programs might affect academic outcomes among schoolchildren. CAL programs, often held after school, provide not only computer-based instruction, but often additional non-technology based inputs such as more time learning academic material and instructional support by facilitators. To isolate the technology-based effects of CAL and estimate additional parameters from the theoretical model, we design a novel multi-treatment field experiment with more than four thousand schoolchildren in rural China. Although we find evidence of positive overall CAL program effects on academic outcomes, when we isolate the technology-based effect of CAL we generally find small to null effects. Our empirical results suggest that the “Tech” in EdTech has relatively small effects on academic outcomes, which has important implications for the continued, rapid expansion of CAL throughout the world.

Keywords: Computer-assisted learning, EdTech, ICT, pencil effects, student learning, educational productivity, RCT

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