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The Increased Use of Tablets In Education: Why Physical Learning Is Sometimes Better

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Abstract: Digital devices are becoming ubiquitous fixtures in classrooms nationwide. Despite this, the costs and benefits of digitization are understudied. For example, Mangen et al. (2013) found advantages in reading with physical books compared to digital readers. The current study extends these findings to physical and digital versions of spatial puzzles. Participants completing a series of physical tangram puzzles were both faster and more accurate than those completing digital versions of identical puzzles on tablet computers. Those in the physical condition were also faster and less error-prone on a subsequent arithmetic test. These results suggest that the current trend of increased digitization in education may have far-reaching and unexpected implications that could compromise learning. Follow-up studies aim to identify the cognitive mechanisms that cause these differences. These findings can be used to develop a set of best practices for incorporating digital teaching tools in the classroom.