Learning, Technology, and the SAMR Model: Goals, Processes, and Practice

Ruben R. Puente, Ph.D.
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Modification
Tech allows for significant task redesign

Augmentation
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Substitution
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Ruben R. Puentedura, As We May Teach: Educational Technology, From Theory Into Practice. (2009)
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The Pen Is Mightier Than the Keyboard: Advantages of Longhand Over Laptop Note Taking

Pam A. Mueller and Daniel M. Oppenheimer

Abstract
Taking notes on laptops rather than in longhand is increasingly common. Many researchers have suggested that laptop note taking is less effective than longhand note taking for learning. Prior studies have primarily focused on students' capacity for multitasking and distraction when using laptops. The present research suggests that even when laptops are used solely to take notes, they may still be impairing learning because their use results in shallower processing. In three studies, we found that students who took notes on laptops performed worse on conceptual questions than students who took notes longhand. We show that whereas taking more notes can be beneficial, laptop note takers' tendency to transcribe lectures verbatim rather than processing information and reframing it in their own words is detrimental to learning.
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