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Strand of Work: Theoretical/Integrative

Published Abstract

This chapter reviews recent research on technology that supports students' developing literacy skills from preschool through high school. We examine technologies for students across three developmental periods of reading: emergent literacy (preschool through kindergarten); learning to read (kindergarten through third and fourth grade) and reading to learn (third grade through high school). In general, when used with students' learning needs in mind, literacy software can effectively support students' acquisition of skills throughout these developmental periods. However, accumulating evidence reveals that good software will not replace good or even adequate teaching unless it is used with attention to optimizing instruction to meet students' individualized learning needs both face-to-face and on computers. We also review the role of technology in assessment of literacy skills and present promising results. In general, technology can provide an environment that supports reliable and valid assessment, especially when automated scoring can assist teachers in the assessment of students' basic skills, writing, summarizing, and synthesizing information across multiple texts. Finally, we review technologies that support teachers' efforts to provide more effective literacy instruction. Overall, current research indicates that technology-based professional development and specific software applications that support teachers' ability to individualize student instruction using assessment are generally effective in improving students' literacy outcomes.

Implications

Technology – based or – assisted systems for scoring and providing feedback to students especially on their summary and essay writing could substantially change the likelihood that teachers will adopt increased use of these assignments. However, to be effective learning tools, these assignments must be intimately connected to the fabric of classroom instruction and accountability more generally.

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