Chapter 67
Technology and Literacy for Students with Disabilities

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ABSTRACT

Literacy is an important part of our culture, providing access to a wide variety of information and opportunities. A myriad of assistive and instructional technologies exist to allow and enhance literacy activities for students with different abilities and needs. This chapter presents the TECH framework that can be used to guide school personnel in making decisions of which technology to choose: Targeting the students' needs and the learning outcome; Examining the technology choices, then deciding what to use; Creating opportunities to integrate technology with other instructional activities; and Handling the implementation and monitoring the impact on students' learning. Four scenarios for using TECH framework for literacy goals are described, including: (a) choosing and using mobile apps for literacy development of young students with developmental disabilities; (b) adapting curriculum literacy materials for students with significant intellectual disabilities; (c) enhancing writing for students with learning disabilities; and (d) providing and integrating accessible instructional materials (AIM) for students with print disabilities. This chapter provides technology implementation guidelines as well as suggestions of numerous technology tools available to support literacy teaching and learning for all students.

INTRODUCTION

Think of the times you approach a door and it automatically opens for you. The sensor has been developed so that whether or not you need that door opened for you, it opens. Similarly, technology has opened the door for literacy acquisition, benefitting students with and without disabilities, most of whom *needed* that door opened. Students with disabilities may *need* doors opened for vocabulary acquisition and development, increased comprehension, and expanded communication skills, while their peers may find it *nice* to access these technological tools (see Figure 1 and Table 1).

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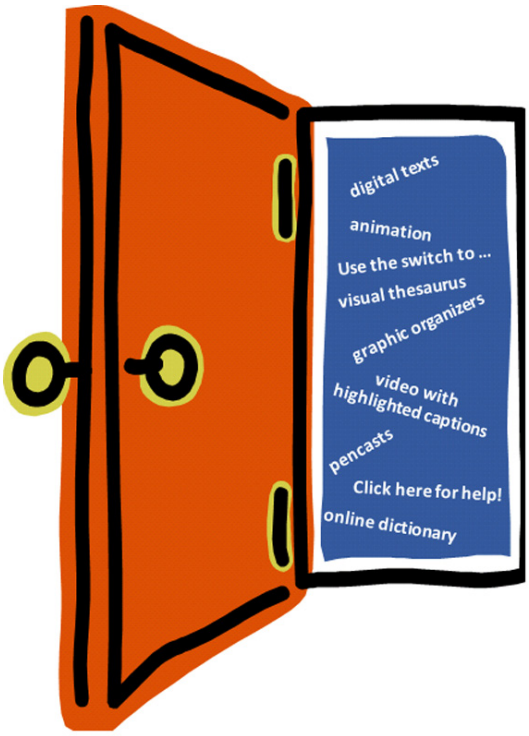
Figure 1.



For the last three decades, professionals in different fields worked diligently to provide support to students with disabilities through the use of assistive technology (AT) items and services. Designed to increase, maintain, or improve functional capabilities of individuals with disabilities (IDEIA, 2004 [§ 1401 (1)]), AT includes items and computer-based programs that provide necessary accommodations and opportunities for students with special needs to participate in the general education curriculum along with their peers (Hasselbring & Glaser, 2000; Wehmeyer, Smith, & Davies, 2005). While historically the use of AT with students with more severe disabilities has been somewhat limited to the devices and solutions that provide learners with access to educational environments (Wissick, Gardner, & Langone, 1999), recent developments in AT products for content-based (e.g., literacy) instruction has proven to be highly beneficial for students with more diverse abilities and needs

Table 1.Literacy: Global to local coherence components correspond to technological support

Global to Local Coherence Components	Technological Support
Develop background knowledge	Illustrations
	Videos
Organize big ideas between and among parts of content read (e.g., chapters, sections)	Recorded introductions
	Graphic Organizers (SmartArt in Word; Inspiration)
Identify summary statements prior to reading	Visual Thesaurus
	e-Text or e-Book
Ask questions while reading	Auditory reminders to ask questions
Understand meanings at the word, sentence, paragraph, and section levels	Digital text
	Animation
Decode words	Pictures
	Online dictionary
	Reading Pen