

Chapter 7

Role of Assistive Technology in Teaching Students With Disabilities in K–12 Classrooms

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ABSTRACT

With the passage of the Individuals with Disabilities Education Act (IDEA) of 1990 (Public Law 101-476), it has become mandatory to address assistive technology for every student with disabilities. The Assistive Technology Act of 1998 provides students with disabilities equal access to assistive technology. Despite the grants available to assist students with assistive technology in every state, stakeholders struggle in integrating assistive technology in K-12 classrooms. Many teachers strive to implement appropriate assistive technology to educate students with disabilities in K-12 classrooms because of variations of the needs in students, lack of proper knowledge and training in assistive technologies, and the higher costs of some of the emerging 21st-century technology. The purpose of this chapter is to analyze the role of assistive technology to improve student learning and engagement and highlight some of the available no-tech, low-tech, and high-tech assistive technology equipment used with students with disabilities in K-12 classrooms.

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INTRODUCTION

Assistive technology is increasingly being adopted with students with disabilities (SWDs) in K-12 classroom environments to accentuate their performance and achievement. In the past decades, the school districts have been giving more attention to assistive technology devices and services. Assistive technology enables SWDs access to the standardized general education curriculum and full participation in inclusive classrooms (Ahmad, 2015). Since the 1990s, with the passage of the Individuals with Disabilities Education Act (IDEA), the school districts have been especially required to assess and provide assistive technology devices and services if needed for a child to receive a free and appropriate public education (FAPE). The term assistive technology means technology designed to be utilized as an assistive technology device or assistive technology service. The term “assistive technology device” means “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability. The term does not include a surgically implanted medical device or the replacement of such device (IDEA, 2004, 300.5).” As per the IDEA requirement, the IEP team must evaluate and consider annually whether each child needs assistive technology devices and services to meet the unique needs.

BACKGROUND

Assistive technology is classified into four categories: (1) high tech- sophisticated computer software and electronic devices; (2) medium-tech mechanical devices such as wheelchairs; (3) low tech- spell checkers, talking calculators, adapted plates, spoons, or Velcro fasteners; (4) no tech- pencil grips, picture cards, highlighters (Simpson et al., 2009). Teachers, parents, and caretakers use assistive technology with students with severe/profound and multiple disabilities in improving their daily living skills. Teachers often use assistive technology to enhance learning tailored to students’ individual needs, abilities, and experiences. Assistive technology helps compensate students’ weaknesses and skills deficits, thus improving a student’s capabilities with a disability. In self-contained special education classrooms, K-12 classroom teachers use assistive technology devices such as microswitches, speech-generating devices, mobility devices, and computer-based software. Teachers integrate high-tech technology such as iPads, iPods, and cell phones in their 21st-century classrooms.

Despite the wide availability of assistive technology devices, teachers tend to use them less frequently in their classrooms. They lack the training on how to use it in the classrooms successfully. Teachers face the issue of inadequate funding, lack of

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