Chapter 52

Dissemination of Assistive Technology Devices for Children with Disabilities through Realabilities

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ABSTRACT

Over the last decade, vast research has been conducted on assistive technology devices and the potential implementation of these devices in the daily lives of individuals with disabilities. Many devices are new to the public and may require further development, but it is important to disseminate information about these useful technologies, which often afford users more independence with their activities of daily living. Unfortunately individuals with disabilities often encounter stigma; research suggests that assistive technology devices may at times contribute to this ostracism. This chapter reviews a variety of technologies that have been used to improve the quality of life of individuals with varying disabilities. These devices are presented in the context of introducing a new children's television show, Realabilities, a pro-social and stop-bullying children's television program that seeks to enhance the social interaction and initiation of typical children towards children with disabilities. Directions for future research and implementation of these devices are also discussed.

BACKGROUND

Increasing awareness and accessibility of assistive technology devices and services to children with disabilities is imperative, so that children with disabilities can be equipped with the proper technology to assist them with a variety of skill sets. Assistive technology devices and services are best defined by the Assistive Technology Act of 1998, as amended (2004): "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 individuals with disabilities" (U.S. Department of Education,

2006). This definition suggests that no individual with a disability is the same; therefore devices are uniquely catered to the individual. Assistive technology serves the purpose of helping and teaching and is measured based on functionality. Additionally, it can be used as a part of a rehabilitative or educational process by which technology is being used as a modality rather than as part of a person's daily life (Cook & Polgar, 2013). Examples include wheelchairs, hearing aids, screen readers for individuals who are blind, and software for individuals with learning disabilities. Working with children, parents, and other professionals is essential in selecting the most appropriate device to meet the primary needs of a child with disabilities (Isabelle, Bessey, Dragas, Blease, Shepherd faculty, & Lanefaculty, 2003).

Assistive technology devices are used as a means of helping children with disabilities achieve greater independence (Dawe, 2006). Parents and children report that despite the challenge of finding appropriate technology for their children, most of the devices increase social interaction and even appropriate interaction. Dawe (2006) found that more than 35% of assistive technology devices are purchased but not successfully adopted. Semi-structured interviews with parents and teachers of young people with cognitive disabilities were conducted in order to address the gaps in existing devices and future research. Parents and teachers identified portability, functionality, and ease of upgrade and replacement as the key factors needed to improve assistive technology devices. Hefty cumbersome devices were often abandoned; parents also recognized that these technologies will eventually "wear out" and need to be replaced (Dawe, 2006). There is an overall desire for these devices to grow along with the child.

Technology can be viewed as an equalizing agent for children with disabilities by encouraging their full participation in school and within their communities. Individuals who may experience difficulty speaking can use a portable voice synthesizer in order to ask and respond to questions (Behrmann, 1998). Technology has afforded powerful tool for teachers and families to use in order to better interact with a child with a disability. Encouraging children with disabilities to use these devices can promote social interactions with their typical peers. These relationships can enhance the school environment and promote children with disabilities' interest and success in social interaction and social initiation; furthermore it helps in developing typical children's social-emotional intelligence, understanding and sensitivity (Kamps, Kravitz, Gonzalez-Lopez, Kemmerer, Potucek, & Harrell, 1988).

LEGISLATION SUPPORTING ASSISTIVE TECHNOLOGY DEVICES AND SERVICES

During the Civil Rights Movement of the early 1950s, it was mandated that assistive technology be provided to children with special needs. *The Education for All Handicapped Children Act* (P.L. 94-142) stems from the decision made in the *Brown vs. Board of Education* case (1954) where separate education was declared not to be equal education under the 14th Amendment of the Constitution (Behrmann, 1998). With this legislation, a "free appropriate public education in the least restrictive environment" for children with disabilities was to be established. This legislation implied that they may be placed in the same classrooms as their typical peers. Inclusion continues to be debated today, and although it is encouraged in many schools, it remains a controversial issue.

The Individuals with Disabilities Education Act (IDEA) was passed in 1975 in order to dictate how states and public agencies should provide early intervention, special education and other services to children with disabilities. Adhering to the particular needs of children with disabilities would enable them to focus on their limitations and receive the necessary aid. The Rehabilitation Act of 1973 prevented

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