

Chapter 48

The Use of iPad® Devices and “Apps” for ASD Students in Special Education and Speech Therapy

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ABSTRACT

This chapter presents an examination of the various uses of iPads and applications (“apps”) for students with Autism Spectrum Disorder (ASD) in special education and speech therapy settings. Although many individuals view these technologies as less academic and as more entertainment or “busy tasks,” if appropriately vetted, and with proper training, they can serve a significant purpose in the lives of individuals with ASD. Using this technology in educational and therapeutic environments can further extend the often static approach to education and therapy treatments to a more fluid and flexible approach meeting the varied and individualized needs of students with ASD.

INTRODUCTION

As the number of autism cases continues to rise, many agencies have begun to take interest in the condition, raising millions of dollars for research related to identifying causes and treatments (Glicksman, 2012). Specifically, autism spectrum disorder (ASD) is an inclusive term that describes a set of neurological conditions that affect an individual’s ability to process information. ASD conditions manifest themselves differently and distinctively in each individual and can often influence an individual’s behavior patterns, as well as the ability to engage in social communication and interactions (American Psychiatric Association, 2013; National Institute of Mental Health, 2016). These manifestations often lead to individuals with

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ASD being misunderstood. However, during this time of rapid advancement in technology, it has become more imperative that educators and speech therapists take the opportunity to understand the evolution of technology and its potential effectiveness in the treatment of students with ASD in both educational and therapeutic settings. It is critically important that ASD be considered a lifelong disorder. Despite this, many individuals with ASD have been known to live independent and productive lives (Benson, 2016).

BACKGROUND

Although many may view technology as less academic or therapeutic and as more of a source for entertainment or as “busy work,” researchers have found that the use of emerging technologies, as well as related app software, show promise for the developmental progress of students with ASD (Ploog, Scarf, Nelson, & Brooks, 2012). Emerging technologies include iPads and other tablet devices that are considered more portable and convenient than computers. Tablet apps include software that accompany iPads and allow access to gaming and the completion of communicative and instructional tasks. If properly vetted and implemented, this technology can be used as an alternative to the more traditional approach to intervention, providing a flexible way of meeting the varied needs of students with ASD. The importance of this will become more evident as the use of technology with this population continues to steadily increase (Odom et al., 2015). This chapter will explore the various uses of technology and apps for students with ASD in special education and speech therapy settings. Although both settings are unique, many of the practices as they relate to the implementation of innovative technologies share basic concepts.

TECHNOLOGY AND ASD STUDENTS

Historical Perspective of Technology and the Needs of Students with ASD

The availability of innovative technologies has grown exponentially. This has provided a new and exciting set of communication tools with varied levels of power, portability, and network ability. These technologies have transformed the way that individuals with ASD communicate and perform daily tasks, allowing them access to more mainstream tools, as well as increased functionality (McNaughton & Light, 2013). As an added benefit, the ability to use more current iPad/tablet devices has increased social acceptance, minimizing the stigma often attached to using more traditional assistive technology (Kagohara et al., 2013). Various types of technology continue to be identified in the ASD research literature, putting in perspective the relevance of its use in educational and therapeutic settings (Odom et al., 2015). Given this, it is important to discuss the evolution of technology as it relates to students with ASD. This evolution can be best presented in three phases: Phase I: No-Tech/Low-Tech, Phase II: High-Tech Traditional, and Phase III: High-Tech – Innovative.

Phase I: No-Tech/Low-Tech Devices

Developed out of a need for individuals to communicate expressively, low-tech assistive technology paved the way for individuals with disabilities to communicate with those around them in the most basic form. Specifically, in the ‘80s and ‘90s, this technology demonstrated an increased potential for use

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