Chapter 90
Simulation Games as Interventions in the Promotion of Social Skills Development among Children with Autism Spectrum Disorders

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ABSTRACT

It has been suggested that game technology can be successfully used to aid in social skills development among those with special needs. Based on the body of research available, such technology has been used in social skills development with children with Autism Spectrum Disorders (ASD). Furthermore, there is research to suggest that certain game technology, such as simulation-based games, can enhance learning and the retention of knowledge, which is of important benefit, given children with ASD show great difficulty in generalizing newly learned skills and knowledge from the instructional to the functional setting. However, at the time of this publication, very little empirical evidence exists that has specifically investigated the use of simulation-based games as interventions in the promotion of social skill development among children with ASD.

INTRODUCTION

This chapter presents the benefits and challenges in using game technology as an effective intervention in social skills development for children with ASD. Specifically, the characteristics of simulation-based games are presented that help make this technology particularly appealing in education, especially for children diagnosed with ASD. In addition to gaming and simulation, the pivotal storytelling component contributing to the successful development of such technology is explored in the context of instructional settings. Furthermore, a discussion on the importance of immersion and motivation is presented.

Although this chapter is introductory in nature, and only begins to scratch the surface as to the potential benefits and challenges of leveraging simulation-based games in the development of social skills for children with special needs, it is anticipated that this chapter will be of particular interest to researchers and practitioners who see potential in game technology as educational and training interventions. More importantly though, the information presented in this chapter is intended to serve as a catalyst, to spark interest and future research, which may provide insight and guidance into the use of simulation-based games in special education settings and how such interventions can help effectively promote the generalization of social skills among children with ASD.

To ensure scholarly rigor, the information presented in this chapter was compiled in a staged approach very similar to that found in primary research (Cooper, 1998). This chapter compiles the great majority of its content from substantive literature including books, academic journals and databases, and online journals. Considerable effort was made to ensure peer reviewed materials were foremost whilst researching and gathering content for this chapter. Although the great majority of the content within this chapter is directly based on information derived from such sources, other sources were used as well, including online articles. These sources were used mainly in a supplemental fashion befitting their academic stature, and are used mostly within the chapter to provide context regarding "practicing real world examples or an in-the-trenches view" of current happenings regarding the line of research.

SIMULATION GAMES AS INTERVENTIONS IN SOCIAL SKILLS DEVELOPMENT

Autism Spectrum Disorders

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM), autism spectrum refers to a range of pervasive developmental disorders comprising autism, Asperger syndrome, and pervasive developmental disorder not otherwise specified. Childhood disintegrative disorder and Rett syndrome are sometimes included in autism spectrum disorders (ASD) discussions, although these two conditions are not considered to be part of the autism spectrum (Johnson & Myers, 2007). Children with ASD are afflicted to varied degrees (Chatzara, Karagiannidis, & Stamatis, 2012). However, those diagnosed are typically characterized by:

1. Impaired social interaction,
2. Difficulties communicating (verbal and non-verbal), and
3. Stereotyped and repetitive behaviors (Laushey & Heflin, 2000).

Specifically, children with ASD have trouble with everyday social situations not seen with neurotypical children. According to the DSM, children with ASD make little eye contact; they tend to pay little attention and fail to respond to others; they do not share their enjoyment and react atypically in response to the show of anger, affection, and other emotions (NIMH, 2011).

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