Chapter 70

Social Skills Development for Children with Autism Spectrum Disorders through the Use of Interactive Storytelling Games

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ABSTRACT

Storytelling is an intricate part of the human psyche and hence, human history. From childhood, stories play an important role in human development, in that, for instance, humans automatically construct a storyline so that they can associate information. There is research to suggest that storytelling in video games can be beneficial because it can be used to help players identify with characters and their goals, creating a greater sense of immersion, positive feelings, and more physiological arousal. Furthermore, when the content is specific and targeted, these games are well suited for promoting acquisition, maintenance, and generalization of skills and knowledge. Findings such as these hold immense promise in the context of improving social skills for children with Autism Spectrum Disorders (ASD). Thus, the use of computers and video games, combined with more traditional storytelling, may serve as hopeful tools for motivating and engaging students as well as promoting learning. This chapter expounds upon this line of reasoning and explores the use of interactive storytelling games as an effective intervention in social skills development for children with ASD.

INTRODUCTION

For centuries, storytelling has been the most universal way in which to pass on information. Sarbin (1986) defined story as a "symbolized account of actions of human beings that has temporal dimension" (p. 3). That story is composed of a beginning, middle, and an end. It is held together by recognizable patterns of events otherwise known as plots and central to these plots is human predicaments and attempts at resolution. The role of narration has been shown to have a significant impact on human cognition and affect (Schneider, Lang, Shin, & Bradley, 2004). So it should come as no surprise that story plays an important role in human development. In fact, it has been proposed that humans automatically construct a storyline so that they can connect pieces of information (Sarbin, 1986).

Moreover, it has been suggested that the importance of story begins in childhood (Eisenberg, 1985; Fivush, 1994). According to Chatzara, Karagiannidis, and Stamatis (2012), storytelling is a well-established educational method for children (Robin, 2006; Valkanova & Watts, 2007; Yuksel, Robin, & McNeil, 2011). For example, early research on the subject has suggested that children, by identifying with heroes or good characters in a story, can psychologically learn how the act of being good is rewarding (Bettelheim, 1976). Such findings are of particular significance for children with autism spectrum disorders (ASD), in that the act of storytelling may be an effective way by which to help improve their social skills.

Autism spectrum disorders affects individuals in varying degrees of severity (Chatzara, Karagiannidis, & Stamatis, 2012), from classical autism to higher functioning, Asperger syndrome. A neurodevelopmental disorder with biological origins, the major characteristics of ASD include a qualitative impairment in social interactions and communication and a restricted or stereotypes pattern of activities, interests, and behaviors (Laushey & Heflin, 2000). Unlike most neurotypical children, who acquire social skills mostly by observation and imitation, it has been argued that these skills need to be taught directly and purposefully to children with ASD because these skills do not come naturally to them (Chatzara, Karagiannidis, & Stamatis, 2012). The need for explicit instruction coupled with the unique characteristics and learning styles of children with ASD makes storytelling a promising educational tool for this population of learners (Gray & Garand, 1993; More, 2008).

Story can be delivered using a variety of options, such as text, images, sounds, and multimedia, to include animation and video (Chatzara, Karagiannidis, & Stamatis, 2012). This is of particular interest for working with individuals with ASD, who tend to be attracted to technology (Heo, 2009; Tartaro & Cassell, 2007), presumably because it offers a predictable and controlled environment free of distracting social stimuli (Chatzara, Karagiannidis, & Stamatis, 2012), which are known to be challenging. In fact, there is research to suggest that computers and video games can be used to effectively improve the social skills of children with ASD (Barakova, Gillessen, & Feijs, 2009; Bernard-Optiz, Sriram, & Nakhoda-Sapuan, 2001; Gal et al., 2009). Thus, children with ASD have been known to not only show a great deal of interest in computers but have also been known to interact successfully with them (Demarest, 2000). This includes being able to successfully use computer software. Such software can also be malleable, adaptable to the special needs of children, to include the development of special hardware solutions and devices (Chatzara, Karagiannidis, & Stamatis, 2012). Thus, the union of story and computers hold great promise as part of educational interventions for learners with ASD, serving as potential catalysts in increasing the odds for learning and helping these learners gain independence (Mesibov, Shea, & Schopler, 2004).

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