Chapter 41
Employing Disability Simulations and Virtual Reality Technology to Foster Cognitive and Affective Empathy Towards Individuals With Disabilities

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ABSTRACT

The chapter will begin by defining empathy and theory of mind (ToM), key constructs for showcasing the importance of simulations and immersive experiences to help typical children better understand the lived experiences of individuals with disabilities. The authors will delineate strengths and limitations associated with Autism, ADHD, Visual, Hearing and Physical Impairment. Next, the chapter will introduce Affect/Effort Theory to demonstrate how formulating positive expectancies of individuals with disabilities will be critical to interest typical children in their peers with disabilities. Moreover, the chapter will highlight the strengths, limitations and best practices for optimizing VRT and disability simulations to enhance typical children's knowledge, intentions and attitudes towards peers with disabilities. Finally, the authors will share qualitative data from a pilot disability simulation of eight children in third through sixth grade from a Camp in Liberty, NY. The results will be discussed in light of future possibilities for effective VRT-based disability simulations.

INTRODUCTION

Disabilities account for the largest minority in the country. Moreover, 95% of all children with disabilities (ages 6-21) in the U.S. are currently integrated into regular education classrooms and this number increased from 33% in 1990-191 to 62% in 2013-2014 (National Center for Education Statistics, 2016). Thus, the need to optimally accommodate children with disabilities in the most sensitive and effective fashion is and will continue to be increasingly integral to their academic and social success. Unfortunately, despite this large number and increase of individuals with disabilities in regular education classrooms, most schools are unfortunately ill-equipped to adequately accommodate individuals with disabilities in the mainstream classroom. Research suggests that simply including children with disabilities in the classroom does not ensure that typical children will have positive attitudes, intentions and an interest in socializing with their new classmates with disabilities. Rather, high quality interventions that effectively educate typical children about disabilities and encourage children to befriend individuals with disabilities are paramount in enhancing the cognitive attitudes, behavioral intentions and socialization of typical children towards their peers with disabilities (Silton, 2015; Vignes et al., 2009). Conversely, if programs are not developed to promote acceptance, empathy and social integration, then children with disabilities will be less accepted by their typically developing peers in the classroom (Favazza, Phillepson, & Kumar, 2000).

Timing of Understanding Disabilities

While preschool children already appear capable of understanding visible disabilities (e.g. physical and sensory disabilities), they seem to be less discerning of less visible disabilities, like mental retardation (Conant & Budoff, 1983) and psychological disturbances (Smith & Williams, 2001). Some research studies suggest that young children may not only possess inaccurate information about less visible disabilities but may possess more negative attitudes towards children with less obvious disabilities, due to a lack of understanding (Maras & Brown, 2000). It has been suggested that young children may experience a lack of clarity about their peers with cognitive disabilities (e.g. mental retardation, autism), since many of these peers with disabilities do not rely on overt, adaptive equipment like a wheelchair, a hearing aid, glasses or a walking stick. In contrast, Goodman (2001) discovered that third graders perceived retardation as a trait, interpreted abstractly to be both predetermined and incontrovertible, based on personal effort. Similarly, Goodman (1989) discovered that eight- to nine-year-olds possessed an accurate conceptualization of learning disabilities, perceiving them as a trait that is abstract and irreversible. Interestingly, these distinctions in conceptualization of disability may relate to the more negative perceptions of third and fourth grade children towards children with disabilities compared to the more positive perceptions of their younger preschool and kindergarten counterparts (Diamond et al., 1997; Goodman, 1989). A number of studies have shown that as typical children age, they rate their peers with both physical and intellectual disabilities less positively, suggesting that there is a negative relationship between age and attitudes (Campbell, Ferguson, Herzinger, Jackson, & Marino, 2004; Bell & Morgan, 2000; Morgan &Wisely, 1996). Unfortunately, this negative relationship between age and attitudes in elementary school children can result in painful bullying in and outside of the classroom.

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