Chapter 8
Using a 3D Simulation for Teaching Functional Skills to Students with Learning, Attentional, Behavioral, and Emotional Disabilities

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ABSTRACT

The study presents results from the use of a 3D simulation for teaching functional skills to students with learning, attentional, behavioral, and emotional disabilities, attending regular schools. An A-B single-subject study design was applied. The participating students (eight eight-to-nine years old) explored the simulation (a virtual school), encountered situations in which they observed how they are expected to behave, and had to demonstrate what they have learned. Each student attended a total of four two-hour sessions. Data were collected by means of observations and semi-structured interviews. All students demonstrated improved functional skills both in terms of the number of behaviors they acquired and in terms of those that were retained and manifested in the real school environment. On the basis of the results, it can be argued that 3D simulations are a promising tool for teaching functional skills to students with disabilities.

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INTRODUCTION

The Salamanca Statement paved the way for the inclusion of children with special needs in regular schools (Unesco, 1994). The fundamental goal of inclusion is to avoid social discrimination by offering opportunities for students with disabilities to learn together with their non-disabled peers in typical classrooms. Students with special needs studying at regular primary schools represent a variety of disabilities, including -but not limited to- learning difficulties, social, emotional, and communication deficits, physical and mental disabilities (Espelage, Rose, & Polanin, 2016; O'Brennan, Waasdorp, Pas, & Bradsow, 2015). As a result, the idea of inclusion is not free of problems. For example, the disadvantaged students find it difficult to communicate with others and engage in a debate, while their interpersonal relationships constitute a stress factor. Their imagination may be limited and their participation in games is passive or dysfunctional. Their academic progress is inconsistent with that of their peers and quite often they exhibit severe weakness, for example, in mathematics or spelling (Wagner, 1995). Their emotional immaturity, their inability to be aware of or understand the emotions of others, leads to non-functional social relationships, isolation, outbursts of anger, and, in general, problems in understanding everyday situations (Nye, Gardner, Hansford Edwards, Hayes, & Ford, 2016; Vlachou, Stavrousi & Didaskalou, 2016). Finally, their deficits in focusing attention on a given task or situation and the neglect of the self, are factors that increase the likelihood of being victimized or manifesting undesirable/ unacceptable behaviors (Thompson, Whitney, & Smith, 1994).

In order to improve students' well-being, additional help is provided through structured school programs, aiming to support their academic performance and improve their everyday functional skills, both within and outside the school environment (Rose, Shevlin, Winter, & O' Raw, 2015). Such programs try to enhance their emotional (e.g., Domitrovich, Cortes, & Greenberg, 2007), behavioral (e.g., Espelage et al., 2016) and communication skills (e.g., Blandon, Calkins, Grimm, Keane, & O'Brien, 2010). Despite the fact that such programs exist and as far as students with mild disabilities (with learning difficulties, attentional, behavioral, and emotional disabilities) are concerned, it seems that the emphasis often lies in structuring the environment to accommodate their academic needs, while issues regarding their social adjustment are neglected (Office of Special Education and Rehabilitative Services, 2015). What is more, the relevant literature suggests that there is a need for intervention studies examining strategies for enhancing their social skills (Garrote, Dessemontet, & Opitz, 2017).