Chapter 3
Virtual World in Learning Disability

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ABSTRACT

In terms of technological advantages, virtual reality or augmented reality remains less popular within the field of learning disabilities. Research shows that children with learning disabilities face various challenges in their day-to-day lives dealing with these disorders, demanding massive solutions. This chapter will address the pros and cons of virtual reality in learning disabilities across different age groups by combining theories of virtual worlds and learning disorders. Exciting research in virtual reality focuses on finding out how psychotherapies have benefits in learning and education. Upon review, it becomes evident that research in the virtual world along with learning disabilities has not yet been examined from a cohesive perspective, illustrating a lack of alliance that determines a more global understanding of the technological advantages of disabilities. Thus, this chapter aims to provide educators with an overview of explanations of the virtual world and to ensure appropriate development of VR/AR applications and special assistance for learning disabilities.

INTRODUCTION

"A hero is an ordinary individual who finds the strength to persevere and endure in spite of overwhelming obstacles." - Christopher Reeve

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Figure 1. Experiencing virtual world through virtual reality headset (Ashworth, 2020)

The term "*virtual world*" needs a simple, meaningful understanding of what it means and what it means to have a virtual world. Mostly, it needs to underrate the relevance of the virtual world in the disabled sector, which can be used to help the individual live. There are a lot of schools of thought on virtual worlds, but unfortunately, they have not yet brought the concept to clarity to clarify the benefits for the disabled. If technology can do everything, which is unbelievable, then it is also essential to see in the other possible directions. Through this, disabled people will benefit, along with special educators and scientists. So far, the conceptual meaning or definition of a virtual world has not been well-defined. The ability to predict a technical definition has its own benefits and gives users a wide range of experience. However, because a virtual world is defined by a mix of different technologies, it makes it hard to tell which technologies have similar features. For example, a smartphone has multiple advantages with different technologies. In this section, we examined technology and its advancement in the field of learning disabilities (LD). According to one of the eminent researchers on learning disabilities, "*Learning disabilities are not a prescription for failure. With the right kinds of instruction, guidance and support, there are no limits to what individuals with LD can achieve" said by* Sheldon H.Horowiz, 2014 (p3) (Cortiella & Horowiz, 2014).

According to the National Center for Education Statistics report (2020), from 2018 to 2019, no less than 33% of students have specific learning disabilities. Learning disabled students are likely to drop out of school three times more often than other dropout students. In line with Butterworth & Kovas (2013) said that students with high IQ may fail to understand the standard mathematical curriculum. Similarly, another report reported that with the help of smartphones, children can learn and interact with their environment easily using augmented and virtual reality (Panwala et al., 2017). And also, it has been proven that the more student interaction is involved in learning technology, the more they can enhance their learning ability (Blaster et al., 2016). Image processing technique has been proved a method for the interactive learning through different applications in higher education (Yaman & Karakose, 2016).