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Teaching Children with Autism Spectrum Disorder Using Virtual Reality: Exploratory Study

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Abstract: Autism spectrum disorder (ASD) is a neurodevelopmental disorder that emanates from a broad range of conditions, which affect the communication skills, social skills. It causes restrictive and repetitive behaviors to individuals. The number of children with ASD is an increasing prevalence around the world. Virtual reality (VR) is an assistive technology, which puts the learner in an immersive learning environment. It allows the learner to interact with that environment in a seemingly real or physical way using special electronic equipment, such as headsets. This exploratory study examines the potential benefits that VR may provide to improving the communication skills of children with ASD. Educating a child with ASD is challenging because access to services, resources, and support for autistic children is inadequate. Therefore, this study intends to investigate the challenges of teaching children with ASD and how VR might help teachers to improve the communication skills of these children with ASD. Online research and literature review were used as a method to gather previously published studies to identify the research gap and provide the groundwork for future studies. Results show that VR offers potential benefits to improving the communication skills of children with ASD but there is a gap in our understanding of the functionalities of all the features of VR technology and how we can utilize it to improve the communication skills of children with ASD. Communication is a broad subject and it is impossible for one study to evidently define the speech challenges of autistic children and provide an irrefutable solution. Therefore, this study proposes further research to dissect how can VR be used to improve the different communication challenges that impede the everyday functioning of autistic children.

Keywords: Autism spectrum disorder (ASD), autistic, Asperger, Disorder-Not Otherwise Specified (PDD-NOS), virtual reality (VP)

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