A Case for Virtual Reality and Individuals with Disabilities

Michelle Ferrer, Eastern Connecticut State University
Gregory Kane, Eastern Connecticut State University
JoonYoung Han, Yeungnam University

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Ten years ago, in her Dr. Earle F. Zeigler Lecture, Mary Hums detailed the need for sport managers to be good citizens. That is, as a profession, sport managers need to consider social entrepreneurship, technology, environmental respect, sport for development and peace, and sport and human rights (Hums, 2010). Dr. Hums’ call to action suggested that, as a discipline, we must find new ways to challenge our students and ourselves and find those voices that have yet to be heard. This project seeks to identify an underrepresented group, challenge the conventional, and make recommendations for new technological advances.

According to a 2016 report from Centers for Disease Control and Prevention (CDC) 24.6% of individuals age 18 and older have a disability. The CDC reports that 38.2% of adults with a disability are obese, compared to 23.2% of adults without a disability that are obese; 11.5% of adults with a disability have a heart disease, while 3.8% of adults without a disability have a heart disease. One avenue to combat health disparities is through participation in sport and physical activity. The National Center for Health Statistics (2017) reported that 56% of adults with disabilities in the United States did not participate in any sport or physical activity, which is significantly higher than the rates of inactivity among the general population. These numbers allude to the barrier’s individuals with disabilities face in sport and physical activity participation. One potential opportunity to address these barriers is access the beneficial use of virtual reality (VR) equipment. In Warburton’s (2013) review of virtual reality gaming health benefits, he found that active gaming is a viable means of increasing activity levels and decreasing sedentary behaviors.

With the introduction of the Oculus Rift and HTC Vive, consumer based virtual reality experiences are now a more practical and approachable technology. With the 14 million VR and augmented reality (AR) devices expected to be sold in 2019 there is currently more than 171 million VR users worldwide. However, there appears to be an underrepresented group that has not had the same experiences as the rest in regard to utilizing such technology. In a VR sport experience, a participant has a limited ability to maneuver. Sports games provide navigation in the environment by using teleporting and limited walking. This is not however, the way someone who uses a manual wheelchair would operate in reality. Wheelchairs, specifically sport wheelchairs are designed for movement that glides in an environment rather than teleporting and walking. This disconnect contaminates the VR environment, reduces the enjoyment of the experience, and prevents the natural locomotion of the participant. The result is a less enjoyable, less realistic, and ultimately less beneficial sport experience. This a call to challenge the conventional practices and develop a more inclusive sport VR experience. Developing a more inclusive sport VR experience could be one way to increase access to physical activity and sport for individuals with disabilities and address Mary Hums’ Zielger Lecture recommendations for the profession.