Virtual Reality and its Potential as an Educational Investment

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Virtual Reality (VR) is defined as a "real or simulated environment in which a perceiver experiences telepresence," and has proven to be both an effective immersive tool for a multitude of industries and a challenging product for customer adoption because of the necessary hardware uptake (Muñoz-Saavedra, 2020). Unlike Augmented Reality (AR), which is able to be deployed through a customer's smartphone, a core requirement and proven industry barrier for VR is headset adoption. The three fundamental elements of VR systems are immersion, perception, and interaction. These three features have been adapted to several industries including gaming, military training, architectural design, education, surgical procedures, and therapy (Cipresso, 2018). In 2016, VR experienced its peak in venture investment, sitting at approximately $857 million in VR startup companies, however two years later this investment capital declined to a quarter of its peak value (Jenkins, 2021). Despite the wavering investment patterns, VR's immersive potential for the user to completely abandon their current reality to enter a constructed reality has shown promising applications that are undeniably interesting and impactful.

Given the current political and social climate, the concept of virtual presence has become more important as the world adapts to the continuing pandemic. In these times where education and industry must continue while physical gathering regulations are subject to change on a daily basis, VR holds unique potential to offer a gathering space " together while apart" in the realm of education. For the past 18 months, the majority of children in Canada have attended "zoom" school, using an online platform to teach and engage students from remote locations. With the challenges of online study, VR poses an interesting proposition for remote education. Researchers have found that increased levels of immersive content that stimulates multisensory engagement, could potentially lead to more effective learning results (Hamilton, 2021). Given VR offers the user to step into an alternative reality and engage with their constructed

surroundings, an educational-motivated environment built to facilitate specific lessons in a school curriculum could offer a unique learning experience that provides virtual community and interactivity. Studies have shown the effectiveness of VR for psychological and rehabilitative purposes, which retrains the emotional and physical body, therefore using this same technology for educational engagement is a logical next step (Muñoz-Saavedra, 2020). Redefining the learning process to be based in "virtual play" with an embodied approach, using movement and interactivity rather than a "sit and listen" type of schooling, is an interesting concept that may lend itself effectively to more students with different learning styles and strengths. Although these types of lessons would require massive monetary investment and development time, it is an educational tool that could be easily integrated into the educational system for years to come.

Ultimately, VR is a tool that offers immersive potential but requires investment and hardware uptake. Given the current social landscape, the motivation for assistance and engagement in education has opened a unique window of opportunity. Preceding the pandemic, the economical market barriers declined the overall venture investment into this technology. However, given the past 18 months, this barrier has declined as there is a need to find helpful tools to push forward the educational system and ensure the best possible success of the students.

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