39. Impact of Virtual Reality on Indian Education System

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Introduction

There are three major challenges that the formal education faces in this day and age. Firs is the transmissionist method which is about giving lectures and leads to passive education training in which there is one-way mode of interaction with the students (Capps and Crawford, 2013). The other is authentic learning methods which is about contextualization and requires many factors which are many a times missing from traditional education methods. Lastly, the most important factor which is required in this modern era is creative thinking, logical reasoning and computational literacy which indeed is difficult to teach (Smith and Hu, 2013). The significance of each of these challenges could have been ignored in past, but if this obstacle is not addressed now will hamper the current and future generation of students. In today's day and age where 92% of teens are found online playing games, using social media platforms to interact. Technology mediated experience can help enhance the learning skills for young minds and can be accustomed accordingly to provide an interactive teaching (Wadhera, 2016). Teaching with technology engages students

with various types of activity-based learning and provides them with a hands-on experience. Tools like Augmented Reality and Virtual Reality provides such kind of an experience and can play a unique role in overcoming the above-mentioned challenges (Subramani and Iyappan, 2018).

Virtual Reality as a Concept in Education

According to Pinho, 2004 virtual reality is characterised by three basic ideas: -

❖ Immersion: the user experiences the real sensation of being inside the virtual world, devices like digital cave and digital helmets help in making this sensation.

❖ Interaction: the user can work on the virtual objects with the help of devices like virtual gloves or joysticks.

❖ Involvement: the involvement of the user in the virtual reality is so real that it feels like a part of interface only, the user can navigate the environment in both active and passive way (Pinho, 2004).

Virtual reality simulations allow students to explore different realities and concepts which are impossible to explain through traditional teaching. From exploring Mars to travelling inside the human body and even to exploring small particles like molecules all this can be learned through VR in an immersive environment (Barrili et al, 2012)

How VR can enhance education in India

Experts say that 90% of what humans see the visual content is retained as the integral part of the memory. This is a major part which is being missing from the Indian Education system and Virtual Reality can be the next step to improve the current scenario. The current system is quire mundane and many a times become a boring environment, due to this student's loose interest. Virtual Reality as a tool helps the faculties in to improve the level of engagement of student by providing them with a gaming environment (Martin-Gutierrez et al, 2017). The Indian education system which is more of board and chalk system doesn't promote decision talking and active learning, our education system focuses on formulae method of learning instead of focusing on concepts. However, in case of virtual reality it promotes decision taking while interacting with a virtual environment and creates an autonomous environment which helps students in understanding the complex concepts. It provides a real time experience which enhances student cognitive skills which creates a positive environment amongst students and helps faculties to achieve their objective of imparting knowledge (Martin-Gutierrez et al, 2017). This provides a good evidence that virtual reality must be the present and future of the Indian education system in order to create an interactive learning environment.

Current trend of Virtual Reality in India

Despite having slow adoption of virtual and augmented reality, the compound annual growth rate (CAGR) is expected to be 76% for this industry for upcoming 5years. In the last few years this country has witnessed 170 new VR/AR start up and the industry is estimated to be around $100-120billion by the year 2021. (The Hindu, 2018). In India many schools and institutes have adopted new technologies such as smart boards, smart classrooms and VR to enhance education. Institutions like Rustomjee Academy for Global Career, Thane Maharashtra is one of the few vocational institutes which teaches through virtual reality. Students work on engine models which are built in virtual environment and various other exercise like health and safety and plumbing fixtures which help the student to understand the concepts in detailed and enjoyable manner. India as a country need to adapt and act accordingly to the fact that we have 31million unemployed citizens who are in need of work and this has to with our traditional approach of teaching. Virtual Reality technology can not only enhance the teaching experience but also play a big role in imparting skills which indeed is the need of the hour.

Conclusion

A strong reason for embracing virtual reality as a tool for educating young minds is that it assists them in engaging with the subjects as a way in which they prefer. The current Indian

education system needs hands on technical training methodology, authentic experiences and most importantly student engagement. Virtual Reality can not only provide this but can also provide world class exposure to the students which is not accessible in current scenario (Dalgarno and Lee, 2010). However, a point which should be noted that virtual reality must not be replaced with real world education but should be used as to create experiences to create better conceptualization for students. To conclude VR is a medium where the limit are still being explored and the possibilities of how education can be delivered can reach to any limits with its foundation. With sound method of teaching and practise and innovations, virtual reality can be a gateway for educators to enter new era of experience and teaching.

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