

# Analysing Virtual Reality (VR) in the Context of Broadcasting Technology

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**Abstract:** *In the 20th century, there was a growing interest in virtual reality technology, which has subsequently evolved into a burgeoning industry. Virtual reality (VR) has many applications across multiple industries, encompassing entertainment, healthcare, and scientific research. Virtual reality (VR) technology now offers a range of advantages and disadvantages across multiple industries. This essay analyzes the advantages and disadvantages of modern technology by exploring the applications of virtual reality (VR) in different industries. The development and widespread adoption of virtual reality technology is of utmost importance. It has transformed the monotonous and unresponsive nature of computer and human interaction and enhanced the human aspect of the two-way communication. Virtual technology, however deeply integrated into people's life, presents both advantages and disadvantages. One can adopt a more objective perspective when evaluating the utilization of analytical technologies and the continuous enhancement in future research and development.*

**Keywords:** virtual reality (VR), technology, future study

## I. INTRODUCTION

Virtual reality is a computer-generated simulation that allows the development of a very realistic virtual world. This immersive technology has the ability to create a perceptual illusion of presence in a virtual world. Consequently, a user can interact with the artificial environment by utilizing electronic devices along with supplementary output devices, such as goggles equipped with screens. In order to completely submerge the user in the virtual environment, virtual reality utilizes electrical signals to gather data from the physical world. Engaging in a video game can lead to a state of complete immersion where one can vividly imagine themselves as one of the characters, particularly when utilizing virtual reality technology. The utilization of virtual technology has become increasingly widespread in the information sector. It is a rapidly growing, integrated, and multidisciplinary technology that has had a significant impact on people's lifestyles. This article explores the utilization of technology across many industries, analyzing its advantages and disadvantages. This essay also explores the utility and thoughtfully crafted nature of VR technology. An examination of virtual reality (VR) technology uncovers both the advantages and disadvantages of its utilization. The utilization of this technology in the military, medical sector, entertainment business, and other domains will have a more substantial beneficial influence on society and individuals' livelihoods. Through a careful analysis of its shortcomings, users can identify the specific areas that need to be fixed in order to progress technology and enhance the overall user experience.

## II. MERITS OF VIRTUAL REALITY IN TECHNICAL COMMUNICATION

Mass communication is no different from how virtual reality is slowly becoming a part of everyday life. One could claim that the extensive adoption of high-quality virtual reality has resulted in significant advantages for this sector. VR allows for the creation of virtual narratives in mass media, which would otherwise pose a significant challenge in terms of storytelling. Virtual reality storytelling has revolutionized journalism by bridging the divide between the emerging realm of VR and conventional narrative. An example of this is the VR film Waves of Grace, which centers around a survivor of the 2014 Ebola crisis in Liberia. The Virtual Reality experience immerses the user in the epicentre of the epidemic's adversely affected neighbourhoods.

**2.1. VR enhances the audience experience:**

Users have unparalleled access to the sounds, sights, and even emotions and sentiments that are an indispensable complement to the news thanks to Virtual Reality's sense of presence. Immersive journalism in virtual reality (VR) headsets is growing more popular and is praised for creating a stronger presence than regular writings. Present-day viewers may participate in global events directly, as opposed to earlier times when they could only watch from a distance. The aforementioned is due to VR-enabled immersive journalism. Researchers have also asserted that viewers may learn more via virtual reality and apply what they have learnt in different contexts. Because of this, immersive journalism has given reporting a new dimension, increasing its impact and memorability. This is the power of virtual reality.

With the use of virtual technology, journalists may now engage their audience in important issues and arouse empathy. The immersive qualities of VR are responsible for the aforementioned. User intention expression efficiency in immersive Virtual Reality social systems was found to be high by Yan and Lv's research. This immersive technology has made it possible for audiences to interact with media texts more successfully than with previous mass communication techniques. It is debatable if virtual reality may increase empathy, especially when discussing important subjects, making it simpler to convey the desired message with fewer interruptions. Journalists may now communicate with their audiences more effectively and deliver the key points with ease, as opposed to earlier times when it seemed impossible to keep viewers' attention.

Virtual reality may give mass communicators a chance to engage their audience and solicit valuable input. According to Lindell and Thatte, the popularity of virtual reality has led to the emergence of 360 media platforms. For instance, Facebook CEO Mark Zuckerberg published a video in 2017 showcasing the headset's capabilities. With Facebook VR, users can virtually explore new places and interact with others using virtual reality goggles. The film serves as a great illustration of how VR may be used to combine reporting and journalism. Facebook places have included its immersive features. As a result, the Zuckerberg video sparked a huge response from Facebook users. They critiqued VR's capacity to arouse emotions through engaging experiences as a diversion from real-world encounters. A benefit of virtual reality for media outlets is its capacity to elicit public response.

Virtual reality is a significant addition to media communications. It is still too early to declare that fully integrating movies and television shows into VR is nearby. However, media companies are utilising virtual reality to provide interesting extra content, such as increasing brand identification and retaining viewers. The audience is drawn to the engaging setting that houses the television show they enjoy, or they can use movies to apply to become virtual visitors. Virtual reality is a very appealing addition in the present era of trying to construct cinematic universes.

**2.2. VR technology is used in legal matters:**

People's psychological demands in life can be satisfied via VR. People may use virtual reality (VR) to create whatever scene they wish to view and feel calm in when they are stressed out and exhausted from work or studying, reducing their psychological strain. Children who dread injections can overcome it with the use of virtual reality technology. The youngster will see the built-in cartoon on a virtual reality (VR) screen before the injection to help them calm their nerves. Children who are set to receive vaccinations serve as the cartoon's major protagonists. The nurse will start wiping the alcohol at the same time as she softly administers the shot. The youngster won't weep in the laid-back setting and could even feel a bit accomplished for finishing the first challenging chore of injecting. Some kids will sob when they see them because they are scared to visit the doctor or get an injection. VR technology will assist physicians and parents in controlling their children's emotions, doing injections efficiently, and minimising unneeded hassles. Additionally, VR technology may be applied to court proceedings. Through the use of VR technology, witnesses will review the crime scene in court, allowing the judge, the defendant, and the audience to see the restored virtual scene clearly and directly. This will cut down on repetitive, time-consuming tasks that are unclear and make it easier to punish offenders fairly.

**2.3. Game entertainment enhances the sense of experience:**

The application of VR technology in gaming and entertainment may enhance people's individual experiences, give them the sensation of being there, and raise their love and satisfaction. People today want a visual and auditory track

surrounding them rather than only viewing the game world through a single window. Games nowadays are also a lot more immersive than they were a few decades ago, which makes it simpler to become involved with the narrative and interact with the virtual environment. According to research, VR improves empathy, and when used with the correct material, people are better able to exhibit respect. The impact of virtual reality does not end there. Changes in mood may also affect reality, and content producers can harness this impact to deliver meaningful messages.

#### **2.4. VR applications help patients relieve pain:**

The goal of medicine is not to cure diseases; VR, at least so far, has not been able to do so. However, it does give some degree of comfort and hope, both of which are valuable. VR can produce a more relaxing environment for people who must endure the discomfort of chemotherapy and combat pain. When they are confined to their wards, many very sick patients experience anxiety and may even ask their doctors to take them away. They may travel anywhere they choose to via VR, and they can even assist the terminally ill in carrying out their final desires. All of these patients' anxiety levels fell after utilising VR, which is significant even though it may not be an accurate representation of a decrease in their symptoms.

#### **2.5. The use of VR technology has promoted the development of the news media industry:**

Without a doubt, VR played a crucial part in the development of robot journalism. In light of this, media organisations and individual journalists are already producing more effectively and efficiently thanks to robotic journalism. In a similar vein, news items are produced by computer programmes in robot journalism. On the other hand, advances in virtual reality present a huge potential for media outlets and news organisations looking for more efficient ways to report the news. As a result, virtual reality enables them to deliver potent experiences that are essential in spreading the word. Virtual reality plays a huge part in immersive journalism, which puts the audience at the centre of the journalistic story. Robotic journalism has made use of Virtual Reality's immersive features. In the latter, news stories created by computers must be persuasive and reach the intended audience; journalists choose to integrate some elements of virtual reality.

A significant approach to connect journalism, technology, and the future is through virtual reality. The foregoing is based on the idea that virtual reality is a powerful tool for media outlets to experiment with how they inform their audience. Virtual reality has filled in the gaps that previously existed between journalism, technology, and the future. Virtual reality has made it possible for interactive media technologies to lessen the gap between technology and news delivery in the contemporary digital era. These immersive technologies are now being used by media outlets and journalists to reengage the audience. As a result, the move toward virtual storytelling has been crucial in closing the gap between journalism, technology, and the future.

### **III. DEMERITS OF VR TECHNOLOGY**

Although the use of VR does make life more convenient for people, there are still certain issues with the equipment's usability at this early stage of the technology's development. First of all, because to the extremely lifelike reproduction of motions, virtual reality can influence the neurological system and result in issues like 3D vertigo and visual fatigue. This may be considerably reduced through delays and app design, yet it still occurs pretty frequently. Long-term VR use may cause the face to droop; many systems don't even have a headband design. Additionally, there is a difficulty with air permeability. Another major disadvantage of virtual reality systems is the need for lengthy cords to link them to a computer or gaming system. To avoid being overextended and breaking, these cables must be connected into unique signal testing units. However, whether utilising these systems at work or in booths, it's still simple to trip over them. On sometimes, the wires even twine themselves around the legs. Wires are sometimes even wrapped around the head in sit-down entertainment programmes, which tilts the helmet and reduces comfort. Additionally, the cost of VR equipment is rather high and cannot be widely accepted by the general people. Only in exceptional circumstances or as an occasional form of amusement would people opt to use VR technology.

#### **IV. DISCUSSION**

When VR technology is used in the medical industry, it is also a wise decision to consistently advance scientific research, look for solutions to every challenging and complex sickness, and discover an improved treatment for every straightforward illness. In terms of engineering design, virtual reality (VR) technology can offer a THREE-DIMENSIONAL environment, allowing engineers to quickly create the designs they want and greatly expanding the design space. This relieves them of the worry that they won't be able to express their ideas in a physical space, and it can also provide customers with a more intuitive experience. Virtual reality (VR) technology may be used in the classroom to increase student motivation, experience level, communication ability, practical ability, and self-satisfaction, which will encourage them to work hard, study hard, and advance. But there are currently several barriers to VR. It's simple to appear foolish and feel exhausted. With the swift advancement of science and technology, difficulties are easily surmounted. Virtual reality (VR) technology will become popular in the future and a new star of future scientific and technical progress, enriching life and sating individual feeling of satisfaction in the era of the global expansion of the Internet.

#### **V. CONCLUSION**

Despite the promise of VR technology to revolutionize various sectors and enhance people's lives, neither the expense nor the quantity of VR equipment has been embraced by any family or business thus far. The user's experience with the gadget, as well as its mobility and usefulness, still have several unresolved concerns. The price is influenced by the costs associated with equipment manufacturing and technological advancement. In order to increase the number of equipment options available to different industries and enable customers to access affordable equipment, it is necessary to consider the implementation of advanced technologies to improve the quality and quantifiability of such equipment. Ongoing research is continuously enhancing our understanding of the advantages and disadvantages of VR technology. Addressing these limitations will allow for the seamless integration of this technology into people's lives, similar to how computers and mobile phones are currently integrated. Studies have demonstrated that the potential for progress in VR technology would enable individuals to derive greater financial benefits from specific firms.

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