

Virtual Reality and Traveler Perception

Wenhui Ma*

Guangdong Institute of Arts and Sciences, School of Economics and Management, Zhanjiang, Guangdong, China

*Corresponding Author: Wenhui Ma

ABSTRACT

The emergence of virtual reality technology provides opportunities for rapid tourism growth. The highly realistic, immersive virtual reality experience offers a strong basis for travelers to understand tourism destinations better and shape travel intentions. This study aims to examine the positive impact of VR technology on tourism development and summarize the factors that influence travelers' perceptions of VR to provide a theoretical basis for VR technology to provide high-quality services to travelers better.

KEYWORDS

Perception; Traveler Experience; Virtual Reality.

1. INTRODUCTION

Virtual Reality (VR) is one of the key technological developments that have a huge impact on the tourism industry. The use of virtual reality has spread across several tourism industries with the emergence of virtual reality in several platforms such as hotels, attractions, and parks. Virtual reality can provide tourists with a more attractive image of the destination than the traditional destination image. Virtual reality applications in the tourism industry are based on the premise that technology can change the experience and positively influence consumer behavior (Zeng et al., 2020). Despite the widespread development of virtual reality in the tourism industry, limited research has been conducted on the impact of virtual reality on travelers' perceptions in the context of tourism. This study systematically investigates the existing literature related to virtual reality in tourism and the factors influencing travelers' perceptions. The purpose of this paper is to establish the relationship between the concept of virtual reality and tourism on the exploration of factors that influence travelers' perceptions and to identify future directions for development.

For this review, the search terms "virtual reality," "virtual reality and tourism," "virtual reality tourist perception," and "virtual reality tourist perception" are used in the title, keywords, and abstract. "Virtual reality factors affecting tourists' perceptions." To ensure the quality and efficiency of the review, research articles from well-known domestic and international journals were used. The exclusion criteria were as follows: The papers and studies were constantly repeatedly searched using multiple search engines to remove other papers and studies of lower rank. Due to the different nature of virtual reality in tourism research, there is no restriction on the date of the searched articles. Based on these studies, some conclusions are drawn in this paper.

2. VIRTUAL REALITY AND TOURISM

Virtual reality is an interactive computer-generated environment that first simulates a realistic scene as a virtual world and allows a person to interact with virtual objects in it, thus giving a sense of presence (Diemer et al., 2015; Kim et al., 2019; Tussyadiah et al., 2018). In virtual reality, the environment is modified according to the way a person behaves, thus developing an internal mental image of the environment, which increases the realism and immerses the person in the virtual world (Tussyadiah et al., 2018).

The greatest advantage of virtual reality is its visualization of spatial environments (Guttentag, 2010). The tourism industry is beginning to develop the ability to visualize spatial environments into major platforms. The current general trend is to provide virtual tours that include handling virtual objects, interactive and immersive experiences, and live reality footage. Virtual reality technology is now being used to give visitors previews of experiences in places and attractions such as hotels and museums (Samuely, 2016). From the perspective of tourists experiencing virtual reality, the main benefits include enhancing the tourism experience (Bonetti et al., 2018; Moorhouse et al., 2018); facilitating immersive, engaging, social, and entertaining experiences (Castro et al., 2018; Guttentag, 2010; Moorhouse et al., 2018). All of these provide excellent premises for the future development of tourism, which will continue to change its paradigm. With it, the tourists will change their own experiences and consumption patterns.

On the surface of the study, virtual reality has three characteristics: 1. visualization, 2. immersion, and 3. interactivity. These characteristics are all related to the interactive experience of tourists in tourism. Often the tourism sector uses the experience of virtual reality as a service that is used to create tools to influence the emotional and experiential communication between consumers and tourists because it induces sensory and emotional experiences for travelers. Studies have shown that the experience of virtual tourism destinations can influence tourists' perceptions.

3. FACTORS OF VIRTUAL REALITY THAT AFFECT VISITOR PERCEPTION

Presence is a key feature for the effective application of VR technology. Presence brings a complex, multifaceted perception to the traveler, which is the process of receiving information and cognition through the interaction of multiple senses (Diemer et al., 2015). Travelers experience presence when they are unable to perceive the presence of VR devices during the use of VR devices, which emphasizes that the underlying mental state of engagement and immersion is necessary for the experience to exist (Witmer et al., 2005).

The use of VR devices allows people to experience "presence," defined as the psychological state of being lost or immersed in the mediated environment, i.e., the degree to which the user can feel their physical "presence" in the virtual environment. When using virtual devices, tourists can feel that they are in the tourist destination and experience the scenery of the destination. The high level of realism in the VR experience can lead to a shift in travel intentions, which is transferred to the physical world, and the higher level of presence in the VR device can lead to a stronger interest in the destination (Tussyadiah et al., 2018).

Sylaiou et al. (2010) found a significant positive relationship between presence and enjoyment in their investigation of virtual museums. VR enjoyment was one of the factors that influenced visitors' perceptions of learning about various aspects of the destination through activities and games designed for them. Tourists also enjoy mastering the VR experience as they learn about the city's culture.

VR is effective in shaping tourists' attitudes and behaviors. VR provides an environment in a virtual world where users can receive multiple sensory information. Being visually stimulated in the virtual world gives tourists the intention to travel to the destination.

4. CONCLUSION

VR research confirmed its persuasive power, which demonstrates that subjective experiences in the VR world can translate into real-world attitudes and induce behavior change (Witmer et al., 2005). In virtual reality, potential travelers can experience the fun, feel each desired image of the destination, and feel the atmosphere of the destination before traveling to the destination, thus experiencing the destination and eventually generating the intention to travel to it in the physical world.

CONFLICTS OF INTEREST

The authors do not have conflict of interest.

REFERENCES

- [1] Bonetti, F., Warnaby, G., & Quinn, L. (2018). Augmented reality and virtual reality in physical and online retailing: A review, synthesis and research agenda. *Augmented reality and virtual reality*, 119-132.
- [2] Castro, J. C., Quisimalin, M., Córdova, V. H., Quevedo, W. X., Gallardo, C., Santana, J., & Andaluz, V. H. (2018). Virtual reality on e-Tourism. In *IT Convergence and Security 2017* (pp. 86-97): Springer.
- [3] Diemer, J., Alpers, G. W., Peperkorn, H. M., Shibani, Y., & Mühlberger, A. (2015). The impact of perception and presence on emotional reactions: a review of research in virtual reality. *Frontiers in psychology*, 6, 26.
- [4] Guttentag, D. A. (2010). Virtual reality: Applications and implications for tourism. *Tourism management*, 31(5), 637-651.
- [5] Kim, M. J., & Hall, C. M. (2019). A hedonic motivation model in virtual reality tourism: Comparing visitors and non-visitors. *International Journal of Information Management*, 46, 236-249.
- [6] Moorhouse, N., Dieck, M., & Jung, T. (2018). Technological innovations transforming the consumer retail experience: A review of literature. *Augmented reality and virtual reality*, 133-143.
- [7] Samuely, A. (2016). Hilton checks in virtual reality push via 360-degree video experience. *Mobile Marketer*. Retrieved August, 17, 2016.
- [8] Sylaiou, S., Mania, K., Karoulis, A., & White, M. (2010). Exploring the relationship between presence and enjoyment in a virtual museum. *International journal of human-computer studies*, 68(5), 243-253.
- [9] Tussyadiah, I. P., Wang, D., Jung, T. H., & Tom Dieck, M. C. (2018). Virtual reality, presence, and attitude change: Empirical evidence from tourism. *Tourism management*, 66, 140-154.
- [10] Witmer, B. G., Jerome, C. J., & Singer, M. J. (2005). The factor structure of the presence questionnaire. *Presence: Teleoperators & Virtual Environments*, 14(3), 298-312.
- [11] Zeng, G., Cao, X., Lin, Z., & Xiao, S. H. (2020). When online reviews meet virtual reality: Effects on consumer hotel booking. *Annals of tourism research*, 81, 102860.