



# Do You Prefer Virtual Tourism (VT)? The Use of Minecraft in Developing Titania Virtual Theme Park

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## ABSTRACT

Virtual theme parks (VTPs) are revolutionizing entertainment by merging traditional amusement with digital technology, offering immersive home-based experiences. This study developed an accessible and enjoyable VTP on platforms like Minecraft, specifically targeting inclusive tourism experiences for individuals with disabilities. We investigated factors influencing the intention to participate in VTP tourism, grounded in the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). Key factors examined included performance expectancy, social influence, facilitating conditions, hedonic motivation, price value, and innovativeness. A preliminary quantitative study involving 50 participants, utilizing an adapted questionnaire, revealed that hedonic motivation had the strongest correlation with intention to use, emphasizing the need for engaging VTP experiences. Performance expectancy also showed a strong positive correlation, highlighting the importance of high-quality, reliable platforms. Facilitating conditions and price value were significant, indicating that practical considerations like resource availability and cost-effectiveness are crucial for adoption. Social influence and innovativeness further underscored the role of social dynamics and openness to new technologies. The study concludes that VTPs offer a forward-thinking, sustainable, and inclusive solution for the entertainment industry. Future research should explore long-term sustainability, environmental impacts, and VTPs' potential to bridge the gap between sustainability, gaming, and tourism, optimizing experiences for diverse groups, especially individuals with disabilities.

## 1.0 Introduction

Virtual Theme Parks (VTPs) are transforming the way experience entertainment, blending the thrill of traditional amusement parks with the boundless possibilities of digital technology. These immersive experiences allow users to explore fantastical worlds and enjoy thrilling rides from the comfort of their homes (Siddiqui, Syed, Nadeem, Nawaz, & Alkhodre, 2022). As technology advances, VTPs are becoming increasingly accessible, ensuring inclusivity for individuals of all abilities through features like customizable controls and assistive technologies (Hughes & Montagud, 2020).

Beyond entertainment, VTPs offer sustainable alternatives to physical theme parks by eliminating the need for extensive infrastructure and reducing environmental impacts such as resource consumption and deforestation (Geng, 2022). This aligns with Sustainable Development Goals (SDGs) 3, 10, and 11, promoting good health and well-being, reducing inequalities, and creating sustainable communities.

Addressing environmental concerns, such as deforestation and its consequences like landslides, is also a focus of this research. In Malaysia, significant tree cover loss has been reported between 2000 and 2023, exacerbated by developments like proposed theme parks in ecologically sensitive areas like Cameron Highlands (Wong, 2021). By promoting VTPs, the study advocates for preserving natural landscapes and preventing further environmental degradation while still providing enriching entertainment experiences. Additionally, it seeks to bridge the gap between the gaming and tourism industries by integrating cultural elements into virtual environments. For instance, the "Journey to the West" game incorporated real scenes from ShanXi Province, allowing players to experience authentic cultural landscapes while engaging in gameplay (Liu, Jiang, & Tao, 2024).

Therefore, this study aims to develop a VTPs using platforms like Minecraft to provide an enjoyable and accessible virtual theme park tourism platform experience for everyone, including individuals with disabilities. Furthermore, this study is to identify the relationship between performance expectancy, social influence, facilitating conditions, hedonic motivation, price values and innovativeness towards behavioural intention to participate in a virtual theme park tourism platform experience.

## 2.0 Literature review

### 2.1 Definition of Virtual Tourism & Virtual Theme Park

Virtual tourism (VT) allows exploration of places using technologies like virtual reality and three dimensional (3D) videos without physical travel. For instance, one can tour the Louvre or witness the northern lights from home. Platforms like Amazon Explore offer live-streamed experiences for \$10-\$99, providing real-time interaction with hosts in different locations (Bilynets, Trkman, & Knežević Cvelbar, 2023). Virtual Theme Parks leverage virtual reality, immersing users in 3D environments for interactive experiences (Wan Hassim et al., 2024). This technology is revolutionizing entertainment, extending its impact from gaming to broader industries (*VR theme park*, n.d.).

### 2.2 Performance Expectancy

Performance Expectancy in the context of using virtual tourism platforms refers to the belief that these platforms will effectively enhance users' tourism experiences by meeting or exceeding their expectations, providing immersive and valuable interactions that improve their perception and enjoyment of virtual travel destinations (Rejón-Guardia, García-Sastre, Orfila-Sintes, & Garau-Vadell, 2020). In the context of virtual tourism platforms, PE is a critical determinant of users' intentions to adopt these platforms. Studies have demonstrated that the perceived quality of content, system efficiency, and interactive features significantly shape tourists' experiences and intentions within virtual environments. For instance, research by Kim (2019), Kim,

Jung, and Uysal (2023) found that PE had the most significant effect on users' continuance intention to engage with virtual experience platforms, particularly in the tourism sector. This suggests that the more effective and efficient a virtual tourism platform is perceived, the more likely it is that users will intend to use it.

### **2.3 Social Influence**

Social Influence (SI) refers to the degree to which an individual perceives that important others believe users should use a new system. SI plays a significant role in the adoption of virtual tourism platforms. The opinions and behaviours of others, especially in social circles, can greatly influence an individual's decision to adopt virtual tourism technologies. According to Zhou and Zhang (2023), alongside PE, social influence is crucial in encouraging the adoption of virtual tourism technologies by industry practitioners. The study highlights that social validation and peer influence can drive users towards adopting virtual tourism platforms.

### **2.4 Facilitating Condition**

Facilitating Condition (FC) refers to the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of a system (Emhmed, Al-Sanjary, Jaharadak, Aldulaimi, & Alkawaz, 2021). In the context of virtual tourism platforms, FC encompass the availability of resources, accessibility to technical support, and user-friendly systems that enable the seamless use of the technology. According to Saputra, Adiputra, Gharnaditya, Budiman, and Diana (2020), FC, although the least significant among other factors, still play a critical role in the behavioural intention to adopt virtual tourism platforms. The study suggests that ensuring adequate technical infrastructure and support systems is vital for the successful adoption of virtual tourism platforms.

### **2.5 Hedonic Motivation**

Hedonic Motivation (HM) is the fun or pleasure derived from using a technology, and it is a critical driver for the adoption of virtual tourism platforms (Kim & Hall, 2019). Studies show that the sensory richness and novelty of virtual reality environments significantly increase user satisfaction and engagement in virtual tourism (Kim & Hall, 2019). The research by Kim and Hall (2019) revealed that hedonic motivation has a profound impact on users continued use of Virtual tourism (VR) platforms, particularly because of the enjoyment and engagement provided by the platforms. This indicates that enhancing the pleasurable aspects of virtual tourism can significantly boost user intention to use VR platforms.

### **2.6 Price Value**

Price Value (PV) refers to the users' perception of the value derived from using a technology relative to the monetary cost. In virtual tourism, the uptake of platforms is influenced by how users perceive the cost versus the value received. According to Yoon, Erdem, Schuckert, and Lee (2021), PV significantly affects users' intention to use VR applications, especially when these applications offer substantial value for money. This suggests that virtual tourism platforms that provide cost-effective and valuable experiences are more likely to be adopted by users.

### **2.7 Innovativeness**

Innovativeness refers to the degree to which an individual is open to trying out new technologies. In the context of virtual tourism, technological innovativeness plays a crucial role in driving user engagement and satisfaction. Studies like those by Kim et al. (2023) have shown that users with a higher level of innovativeness are more likely to adopt new technologies, including virtual tourism platforms. The study highlights that innovation in technological features positively impacts user experiences, thereby driving engagement and satisfaction rates, which are crucial for the growth of virtual tourism platforms. Figure 1.1 display the proposed conceptual framework for the current study.

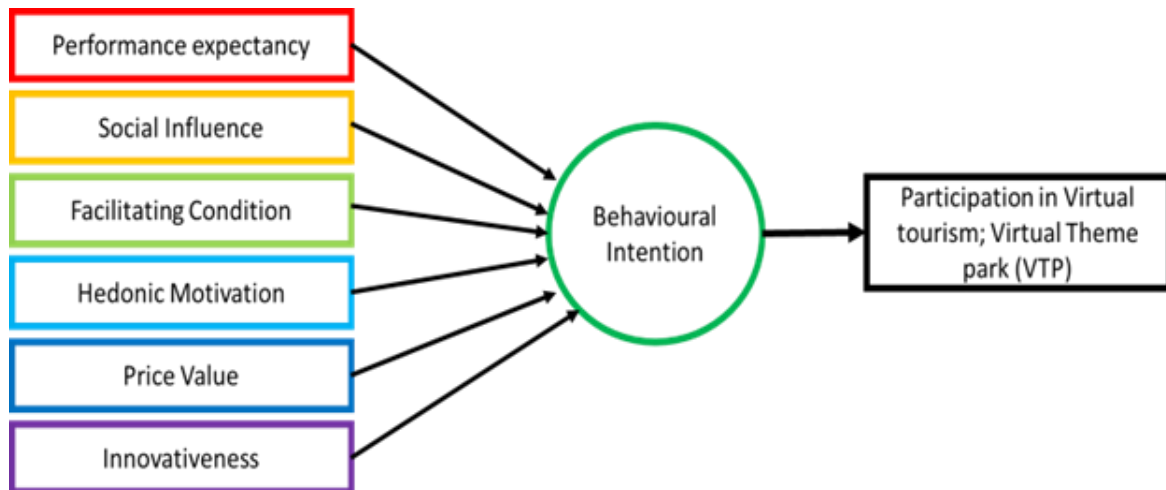


Figure 1.1: Research framework for Behavioural Intention to use Virtual Theme Park (VTP)

Source: Adapted from Bilynets et al. (2023)

## 2.8 TITANIA – “Steam, Splendour, Spectacle”

Titania is a virtual theme park that blends the allure of Victorian imagination with the limitless possibilities of the digital age. Designed to transport visitors to a world of steam-powered marvels and intricate craftsmanship, Titania offers an immersive experience that fuses historical charm with innovative technology. Embracing the steampunk aesthetic, the park features adventures and attractions that celebrate invention and creativity at every turn.

Inspired by the queen of the fairies from Shakespeare's "A Midsummer Night's Dream," Titania evokes a realm of magic and enchantment. Just as Titania rules over a mystical land, this virtual theme park creates a fantasy world brimming with wonder and excitement. The name "Titania" suggests majesty and allure, drawing visitors to a place where the ordinary transforms into the extraordinary. It honours the timeless appeal of fairy tales and the enduring fascination with the unknown, making it the perfect name for a destination where imagination knows no bounds.

Titania's slogan, "Steam, Splendour, Spectacle," encapsulates the essence of the park. "Steam" represents the heart of the steampunk theme, highlighting the industrial and mechanical wonders that power the park. "Splendour" reflects the grandeur and elegance of the Victorian era, evident in the park's architecture and design. "Spectacle" emphasizes the awe-inspiring experiences and visual wonders that await every visitor.



Figure 1.2: Titania Virtual Theme Park (VTP)

### 3.0 Methodology

This preliminary quantitative study utilized a convenience sample of 50 participants. The sample was collected through social media, specifically Facebook using Google Form along with YouTube channel as reference. The research instrument – questionnaire was adapted from the work of Bilynets et al. (2023). Inferential analyses were conducted on the collected data. The reliability of the instrument was assessed using Cronbach's Alpha, yielding a high reliability coefficient of 0.977 across 21 items.

### 4.0 Discussion of analysis and findings

The correlation analysis reveals significant relationships between various factors—Performance Expectancy, Social Influence, Facilitating Condition, Hedonic Motivation, Price Value, Innovativeness—and the relationship on the behavioural intention to participate virtual theme park tourism platform as shown in Table 1. The strongest correlation is observed between **hedonic motivation** and behavioural intention ( $r = 0.835$ ,  $p < 0.01$ ), indicating that the pleasure or enjoyment derived from virtual theme park tourism platform is a critical driver of users' intentions. **Performance expectancy** also shows a strong positive correlation with Intention to Use ( $r = 0.818$ ,  $p < 0.01$ ), suggesting that users' beliefs about the virtual theme park experience's ability to meet their expectations significantly influence their intention to engage with it.

Other factors such as **Facilitating Condition** ( $r = 0.793$ ,  $p < 0.01$ ) and **Price Value** ( $r = 0.809$ ,  $p < 0.01$ ) also exhibit strong positive correlations with Intention to Use, implying that the availability of necessary resources and users' perceptions of good value for money are important considerations in users' decision to participate virtual theme park tourism platform. Additionally, **Social Influence** ( $r = 0.732$ ,  $p < 0.01$ ) and **Innovativeness** ( $r = 0.751$ ,  $p < 0.01$ ) significantly correlate with Intention to Use, highlighting the importance of social factors and the users' openness to new experiences in their adoption of virtual theme park tourism platform.

Table 1.1: Result for each model.

Variable	Behavioural Intention to Participate	Sig. (2-tailed)
Performance Expectancy	0.818**	0.000
Social Influence	0.732**	0.000
Facilitating Condition	0.793**	0.000
Hedonic Motivation	0.835**	0.000
Price Value	0.809**	0.000
Innovativeness	0.751**	0.000

These findings align with existing literature on the factors influencing users' behavioural intention to participate virtual theme park tourism platform. The significant correlation between **hedonic motivation** and behavioural intention to participate suggests that the enjoyment and pleasure derived from virtual tourism are powerful motivators for users. Research has highlighted the importance of hedonic value in boosting user engagement and intention to use virtual reality (VR) tourism platforms (Kim & Hall, 2019; Lee & Kim, 2021). Companies offering virtual tourism experiences should focus on enhancing the entertainment and enjoyment aspects to increase user's adoption.

**Performance Expectancy** is another critical factor influencing the behavioural intention to participate virtual theme park tourism platform experiences. This result is consistent with research indicating that users are more likely to adopt VR tourism platforms when user believe the experience will meet or exceed expectations (Yoon et al., 2021). Ensuring that virtual tourism experiences are high-quality and reliable is essential for fostering user's trust and increasing intention to use.

The positive correlations between **facilitating condition** and **price value** with behavioural intention to participate virtual theme park tourism platform suggest that practical considerations, such as the ease of access to resources and the perceived value for money, are crucial in driving user adoption of virtual tourism theme park platforms. These findings echo the results of previous studies that highlight the importance of resource availability and cost-effectiveness in technology adoption (Saputra et al., 2020).

Lastly, the significant correlations of **social influence** and **innovativeness** with behavioural intention to participate virtual theme park tourism platform indicate that social factors and users' willingness to try new technologies play important roles in the adoption of virtual theme park tourism platform. This suggests that social proof and targeting early adopters could be effective strategies for promoting virtual tourism experiences (Hateftabar, 2022; Zhou & Zhang, 2023).

## 5.0 Conclusion and Future Research

This study explored the critical factors influencing the intention to use virtual tourism platforms, particularly Virtual Theme Parks (VTPs). The findings highlight the significance of hedonic motivation, performance expectancy, facilitating conditions, price value, social influence, and innovativeness as key determinants of user adoption. The strong correlation between hedonic motivation and intention to use underscores the importance of ensuring that virtual tourism experiences are engaging and enjoyable. Additionally, the positive relationship between performance expectancy and intention to use emphasizes the need for high-quality, reliable virtual theme park tourism platform that meet user expectations.

Facilitating conditions and price value also emerged as significant factors, suggesting that practical considerations such as resource availability and cost-effectiveness are crucial for adoption. Social influence and innovativeness further highlight the role of social dynamics and openness to new technologies in driving user engagement with virtual theme park tourism platform.

While the study provides valuable insights, it also points to the need for further research into the long-term sustainability and environmental impacts of VTPs, as well as their potential to bridge the gap between the gaming and tourism industries. Practically, these findings recommend that companies focus on enhancing the entertainment value of virtual theme park tourism platform experiences, ensuring accessibility for all users, and leveraging social proof to encourage wider adoption.

In conclusion, virtual theme park tourism platform, particularly VTPs, represent a forward-thinking solution for the entertainment industry, offering inclusive, sustainable, and engaging experiences. Future research should continue to explore the evolving dynamics of user adoption in this rapidly developing field, with a focus on optimizing both the technological and experiential aspects of virtual theme park tourism platform. Finally, aligns with Sustainable Development Goals (SDGs) 3, 10, and 11, promoting good health and well-being, reducing inequalities, and creating sustainable communities.

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### Author Contributions

Individual contributions of authors should be specified in this section to give appropriate credit to each author, for example:

**C.Y. Cheng:** Conceptualization, Methodology, Software, Data Curation, Writing- Original Draft Preparation, Supervision; **W.B. Quah:** Software, Validation, Writing-Reviewing and Editing. **S.L. Kong:** Validation, Writing-Reviewing and Editing; **K.Z. Loo:** Writing- Original Draft Preparation, Data Curation, Software; **Y.X. Tan:**

Writing- Original Draft Preparation, Data Curation, Software; **J.M. Koay**: Writing- Original Draft Preparation, Data Curation, Software. **N.H.A. Ismail**: Validation, Writing-Reviewing and Editing.

### Conflicts of Interest

The manuscript has not been published elsewhere and is not being considered by other journals. All authors have approved the review, agree with its Submission and declare no conflict of interest in the manuscript.

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