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THE BENEFITS AND CHALLENGES OF IMPLEMENTING VIRTUAL REALITY IN HOTEL INDUSTRY: A CASE STUDY IN UZBEKISTAN

Abstract

The hotel industry is facing new challenges as competition grows and customer expectations shift. In a crowded marketplace, hotels need to find innovative ways to differentiate themselves and stand out from the competition.

This research paper explores the potential use of virtual reality (VR[1]) technology in the Uzbekistan hotel industry to provide guests with a unique and personalized experience that goes beyond what traditional marketing materials can achieve. The research examines the challenges and benefits of VR technology in the hospitality industry and provides an example of VR uses in the hotel industry.

Furthermore, the study analyzes primary data collected from a sample of 29 respondents to determine the potential impact of VR technology on the industry. The results suggest that VR can be a powerful tool for marketing and promotion, increasing guest satisfaction, and improving efficiency in booking

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[1] Virtual Reality (VR) is an immersive technology that simulates a three-dimensional environment generated by a computer. It allows the user to experience a different reality, separate from the physical world, through the use of a headset.

times. However, the implementation of VR technology can be costly and difficult to integrate into existing systems and workflows.

Finally, the study concludes that VR technology has the potential to provide hotels in Uzbekistan with a competitive advantage in a crowded marketplace.

Keywords: VR, hotel industry, Uzbekistan

Introduction

The hotel industry has a long-standing reputation for its warm hospitality and exceptional ability to provide guests with a comfortable and memorable stay. While this has always been the cornerstone of the industry, hotels are now facing new challenges as competition grows and customer expectations shift. In a crowded marketplace, hotels need to find innovative ways to differentiate themselves and stand out from the competition.

In Uzbekistan, the hotel industry is experiencing rapid growth, with new hotels and resorts popping up all over the country. However, as the industry becomes increasingly competitive, hotels need to find new and creative ways to distinguish themselves from their rivals. By incorporating VR technology into their marketing strategy, hotels in Uzbekistan can offer their guests a unique and personalized experience that goes far beyond what traditional marketing materials can achieve.

Through the use of VR, hotels can showcase their amenities, rooms, and services in an engaging and interactive way, allowing guests to fully immerse themselves in the hotel experience before they even arrive. This can include virtual tours of the hotel's facilities, such as the gym, spa, or swimming pool, as well as interactive features that allow guests to customize their stay according to their preferences. VR can also be used to provide guests with personalized

recommendations and information about local attractions, ensuring that they make the most of their stay and create unforgettable memories.

Literature Review

Definition of VR

Mandal (2013) describes virtual reality as "a technology which allows a user to interact with a computer-simulated environment, whether that environment is a simulation of the real world or an imaginary world." This means that any given environment including hotel and its facilities also can be simulated. Accordingly, adequate hardware and software is needed to be able to have such an interaction. A Virtual Reality starter pack consists of VR goggles[2] and headset, the camera, and a device that can support VR such as personal computer (PC), a laptop, or a PlayStation.

The table below describes SWOT[3] analysis of VR technology in the hospitality industry based on the research conducted by Dilek et al. (2018). As can be seen that the table consist of four columns for each category of SWOT. Under each of these headlines there are several factors which belong in that category. For example, sustainable tourism and environmental protection are considered an opportunity, while lack of tourist interactions is a weakness. Furthermore, advantages may include that VR can be powerful promotional tool. But at the same time implementation of VR can result in negative effect in tourism and related sectors.

Challenges and Benefits of VR in tourism

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[2] A headset that lets the user see and interact with a computer-generated three-dimensional world.
[3] SWOT analysis is a tool used to evaluate a company's strengths, weaknesses, opportunities, and threats.

Strengths	Weaknesses	Opportunities	Threats
A powerful tool to enhance tourism	Limitations in technology	Protection of cultural and natural heritage sites	The lack of cultural interaction
A powerful promotional tool	Negative first impression	Sustainable tourism and environmental protection	Negative impact on real tourism and travel
Marketing tool for travel agencies/tour operators	Distance from real experience	Accessibility for disabled or elderly visitors	Economic impacts of real tourism in emerging economies or no high-tech destinations
Testing out products before going or purchasing	Lack of resident-tourist interactions	Time travel	Taxation of VR applications in the tourism industry
The ability to provide sensory experiences to customers	High cost for customers	Turning dreams into reality	Contributing to an anti-social process in society
To reduce the negative impacts of tourism	Physical and psychological disorders	Embody another being	Negative effects on other sectors related to tourism
Creating a destination attraction	Ambiguity about tourism policy and planning	Design without limitations	Negative effect on employment in tourism and related sectors
Embody knowledge	Impossibility of souvenir purchasing	Achieve the impossible	Virtual travel/ tourism acceptance and accessibility
Allowing the exploration of each destination in great depth	The lack of definitions for tourists	Be fearless/ removing bureaucratic, security and language problems for visitors	Monopolization or non-competition between tour operators
Positive cost effects for tourism businesses	The lack of a conceptual framework	Alternative tourism experiences such as e-sporting events	Other legal issues

Table 1 - SWOT Analysis of VR Applications in Tourism

Example of implementation VR in the hotel industry

Virtual reality technology has been increasingly utilized by a range of industries, including the lodging industry. The use of virtual reality in hotels has been seen as a way to enhance guest experiences and to differentiate hotels from competitors. There are several potential benefits of implementing virtual reality in the hotel industry, including increasing guest satisfaction, efficiency in booking times, and marketing opportunities.

One of the key benefits of virtual reality in the hotel industry is the potential to increase guest satisfaction. Virtual reality provides a way for guests to explore and experience a hotel before they arrive, giving them a better understanding of

the hotel's amenities and layout and potentially leading to higher guest satisfaction and better reviews (Hotelogix,2018). Additionally, virtual reality can be used to showcase the surrounding area and attractions near the hotel, giving guests a better sense of what the location has to offer and helping them plan their stay accordingly (Alexandre, 2018).

Virtual reality can also increase efficiency in booking times, which can result in cost savings for hotels. By showcasing the hotel's rooms and amenities in a virtual tour, guests can make more informed decisions and have a better idea of what they are booking, potentially leading to shorter booking times and more efficient use of staff time (Revfine).

Furthermore, virtual reality can be used as a powerful marketing tool for hotels. By providing an immersive and engaging way to experience the hotel, virtual reality can help hotels stand out in a competitive market and attract more guests. Virtual reality can also be used to showcase the hotel's amenities and facilities in a more interactive and engaging way than traditional photos, potentially leading to increased bookings and revenue (Hospitality Tech, 2022).

According to recent research, there are several challenges that must be overcome in order to implement virtual reality technology in the hotel industry. A major obstacle is the cost of implementing VR technology, which can be prohibitive for some hotels. The high cost is due in part to the need for specialized equipment and the expensive software required to create immersive experiences. Additionally, VR technology is still relatively new, and it can be challenging to integrate into existing systems and workflows. This can make it difficult for hotels to provide a seamless experience for guests who are accustomed to traditional hotel amenities. Finally, there is a risk that VR may not live up to expectations, potentially leading to disappointed guests and negative reviews (Cheong, 1995).

Despite these challenges, some hotels are already exploring the potential benefits of VR. For example, Marriott International has experimented with VR

technology to provide guests with virtual tours of its properties (Marriott International, 2018). Similarly, according to Hotel Management (2017) Hilton Worldwide has used VR technology to create an immersive experience for guests at its Innovation Gallery[4], where visitors can explore new hotel concepts and designs. By leveraging the power of VR, hotels can provide guests with unique and engaging experiences that set them apart from competitors.

Methodology

The methodology is important to be able to gather accurate data and establish how this data is collected. The data collection method used for this research is primary type. This means that the data is being collected by the author of the research paper which is also known as first-hand data collection (Hox & Boeije, 2005). A survey is appropriate because there is no need to conduct any further in-depth research like interviews.

The platform used for the online survey is called Google Survey. The sample size consisted of 29 respondents. The data collection has been performed during March, 2023. All questions of the survey are attached at the end of the research, in Appendix. The survey was composed of two parts. The first part consisted of 6 questions intended to determine the attributes of the participants. The second part included a set of 6 statements about implementation of VR. For second part, Likert scales were defined as follows: 5 – Very useful; 4 –Somewhat useful; 3 – Neutral; 2 – Somewhat useless; 1 –Very useless. These different types of questions help to determine, what is important for the respondents when booking a hotel room and how the virtual reality could then have an impact on the hotel industry.

The data were analyzed with dedicated software named SPSS[5]. In addition, frequency tables and other descriptive data indicators like standard deviation,

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[4] The Innovation Gallery is a area which serves as a venue for showcasing Hilton's leadership and innovation.
[5] SPSS (Statistical Package for the Social Sciences) is a computer program used to analyze data. It is often used in academic research and business to make informed decisions based on data analysis.

range or median were analyzed. In addition, every figure and table are accompanied by a detailed description and interpretation of the results.
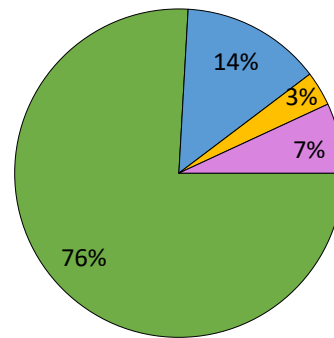
Analysis and Discussion

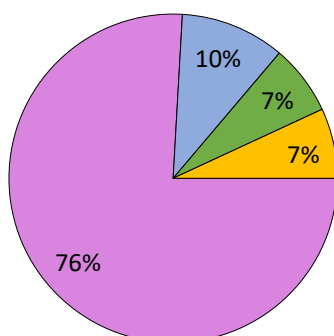Figure 3: Gender Split
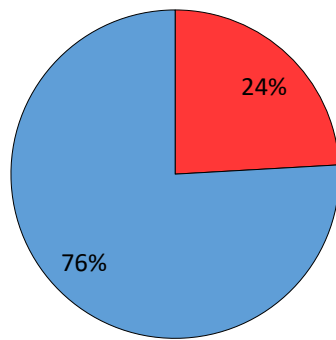
Female   Male

Figure 4: Age Group

14%
3%
7%
76%

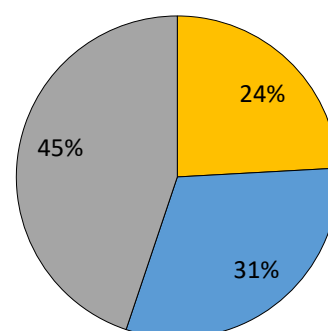18 - 29   30 - 39   40 - 49   50 - 59

As can be seen in the Figure 3, the gender split was different: 24.1 % females and 75.9 % males. Furthermore, the number of respondents who is below 29 (75.9%) was considerably higher than number of people in other age groups (24.1%).

Figure 1: Frequency of Travel

10%
7%
7%
76%

1-2   3-5   6-10   Over 10

Figure 2: Employment Status

24%
45%
31%

Hospitality Specialist   Student   Other

Figure 5 shows that 69 % of the respondents heard about the implementation of VR in Hotel industry. However, only 28 % of the participants responded that they used VR technology during their stays before.
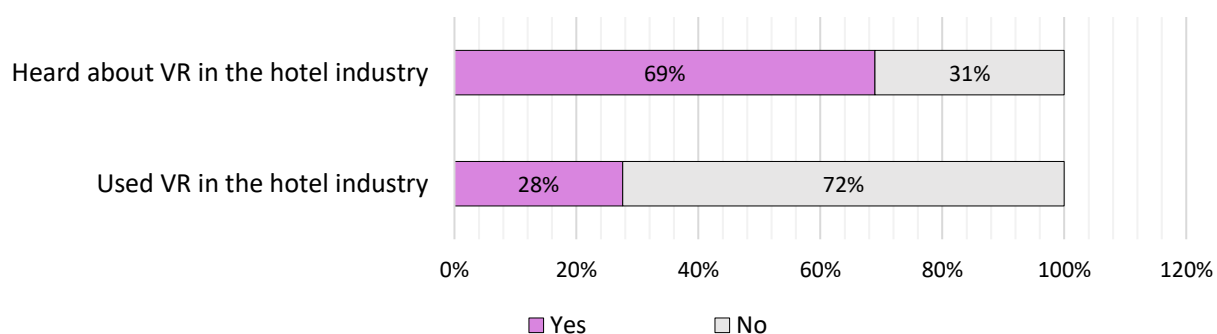
Figure 5: Respondents answers about VR (n=29)

Figure 6. Participants responds for the question:
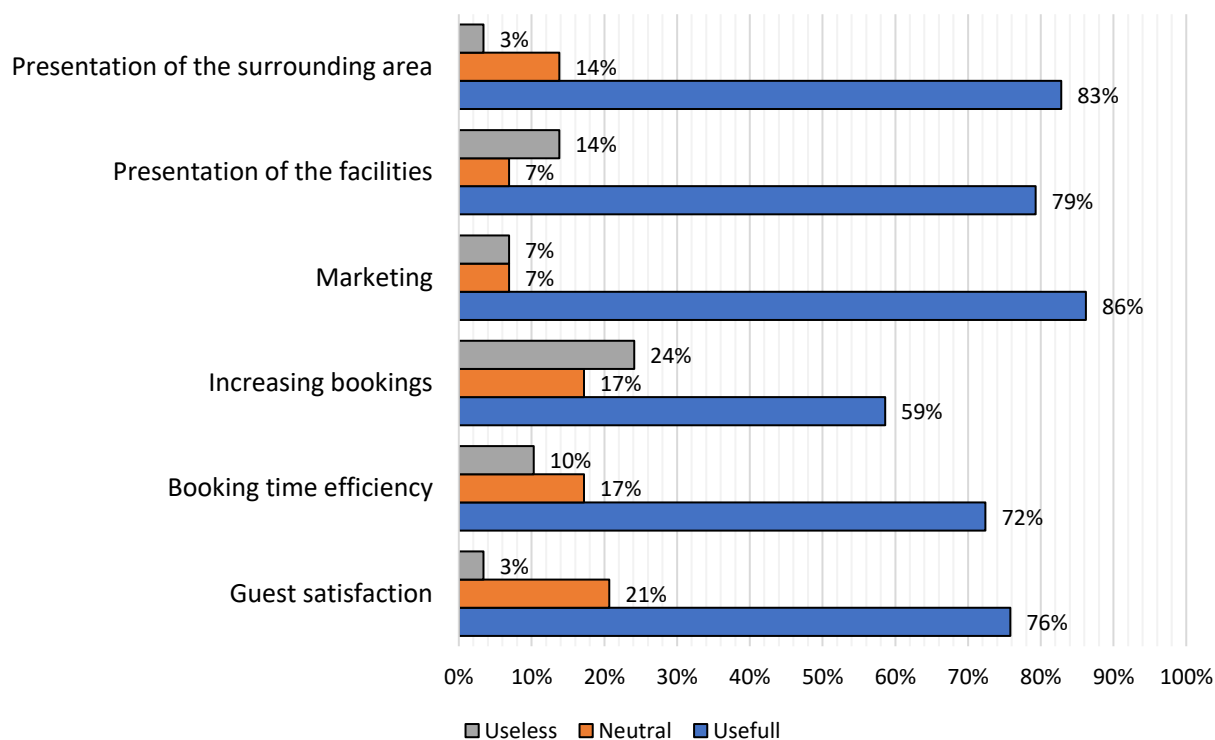Do you think that implementing VR in the hotel industry will be a useful tool for...

Table 2 below summarizes the degrees of usefulness for 6 statements implemented in the second part of the survey. For clarity, "Very useful and Somewhat useful" and "Very useless and Somewhat useless" are summarized in two categories accordingly. The overall mean value is 4.02 out of 5, which suggests the overall point of view towards to the VR, in general, is positive.

Do you think that implementing Virtual Reality (VR) in the hotel industry will be a useful tool for	Useful	Neutral	Useless	Mean (x)	Standard deviation (s)
Guest satisfaction	75.8%	20.7%	3.4%	4.03	0.82
Booking time efficiency	72.4%	17.2%	10.3%	3.86	0.92
Increasing bookings	58.6%	17.2%	24.1%	3.59	1.21
Marketing	86.2%	6.9%	6.9%	4.38	0.90
Presentation of the facilities	79.3%	6.9%	13.8%	4.03	1.02
Presentation of the surrounding area	82.8%	13.8%	3.4%	4.21	0.82

Table 2 - Participants point of view about the VR (n=29)

As can be seen in Table 2, relatively high number of the respondents (86.2%) agreed with the statement that marketing opportunities will benefit from VR technologies (x =4.38). Consequently, 82.8% of the respondents agreed with the statement that VR can be useful tool to promote and showcase surrounding area (x =4.21). "Presentation of hotel facilities and amenities" and "Guest satisfaction" were another statement that VR can be game changer with providing a relatively high average value (x =4.03). On the other hand, 72.4% of the respondents considered that use of VR can help to reduce time spend on booking a hotel room. Finally, the proportion of the respondents who agreed with the statement "increasing bookings" was relatively low (58.6 %) means that VR might not be excel tool for hotel managers to increase number of bookings.

Conclusion

The hotel industry in Uzbekistan is experiencing rapid growth, and hotels need to find ways to differentiate themselves and stand out from the competition. This research paper explores the potential use of VR technology in the hospitality industry and examines the challenges and benefits of its implementation. The findings show that virtual reality may be a significant tool for marketing and promotion, enhancing visitor pleasure, and improving booking efficiency. However, VR implementation can be costly and difficult to integrate into existing systems. Despite these challenges, hotels in Uzbekistan can use virtual reality to provide guests with a unique and personalized experience that distinguishes them from their competitors. Hotels can demonstrate their facilities, rooms, and services in a lively way by introducing VR technology into their marketing plan.

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