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An Integration of 3D Design in Malaysia Digital Tourism

Nor Khalidah Noor Hishamuddin[1], Inda Murni Hairul Anuar[2],
Sharkawi Che Din[3], Nur Aniza Mohd Lazim[4]
[1,2,3,4]College of Creative Arts, Universiti Teknologi MARA,
Kuala Selangor Branch, Puncak Alam Campus, Malaysia

2021856314@student.uitm.edu.my[1], *indamurni@uitm.edu.my[2],
sharkawi237@uitm.edu.my[3], aniza32@uitm.edu.my[4]
*Corresponding author

ABSTRACT

With multiple projects aimed at boosting visitor experiences and advertising the country as a top vacation destination, the usage of digital technology in the travel and tourism sectors has been expanding quickly in Malaysia. Bringing 3D design into digital tourism is one such attempt that offers an immersive and interactive style to highlight Malaysia's tourist attractions. Despite the advantages, 3D design is mostly used in popular tourist destinations and major cities in Malaysia for digital tourism. This study analyses the use of 3D design in Malaysian digital tourism and its potential to increase tourist numbers, particularly in less well-known countryside destinations. This study will find comparable themes and patterns regarding the application of 3D design in digital tourism in various Malaysian regions using a case study approach. The expected results of this research include improving traveler and tourist experiences, archiving 3D designs for use in future research, and inviting more travelers and tourists to Malaysia, which would boost the country's tourism benefits.

Keywords: *Tourism Malaysia, Malaysia Attractions, 3D Design, Digital Tourism.*

1 INTRODUCTION

The government and tourist sector in Malaysia have embraced technology in enhancing traveler and tourist experiences to showcase Malaysia's cultural history and natural beauty. The coronavirus wave that occurred, affected all parts of the world, such as the tourism sector, by preventing tourist travel to other places. As a result, digital tourism has been expanding quickly in recent years. The production of advertisement videos in mobile apps and websites that will update travelers and tourists on attractions, options for accommodation, and activities has been one of the main ways that digital technology is being used in Malaysian tourism. The interactive maps, feedback, and insights from other travelers and tourists discovered in these promotional videos make it simpler for tourists to keep track of their journeys and discover Malaysia. The invention of virtual reality (VR) and augmented reality (AR) experiences is another way that digital technology has been used in the tourism sector. As an example, by way of the Malaysia Digital Economy Corporation (MDEC), gaming incubators like Level Up Inc. In Bangsar South and C03 Social Office in Puchong have been set up, allowing aspiring enthusiasts and entrepreneurs to try out various VR and AR creation kits firsthand. Commonly, tourists visit places within a specific time due to their free time or holidays, but travelers are mostly more flexible and stay in places for a long duration. Influencers and travel bloggers make use of social media platforms to share their tips and tales with their followers, which has helped promote tourism in Malaysia. In general, Malaysian digital tourism has improved visitor experiences and helped promote Malaysia as a top travel destination in the region.

2 LITERATURE REVIEW
2.1 3D Design

A wide range of industries, including architecture, engineering, entertainment, and manufacturing, have been transformed by the integration of 3D design. It has created new opportunities for creativity, innovation, and problem-solving. 3D design technology has helped improve experiences in digital tourism by providing a more interactive and realistic portrayal of tourist destinations, monuments, and cultural places. The significant objects are digitized and displayed using innovative 3D display technology. A 3D display technology that can attain a 360-degree angle of view serves as the aim of 3D displays by displaying the most accurate representation of real objects (Yue, 2010). The incorporation of 3D design in digital tourism offers intriguing potential in Malaysia, a nation known for its rich cultural heritage, diverse landscapes, and thriving tourism industry. The government and tourism industry in Malaysia is aware of how technology may improve travelers' and tourists' experiences and highlight the nation's natural and cultural attractions. The making of promotional movies for mobile applications and websites is one of the main uses of 3D design in Malaysian digital tourism. These videos are an effective resource for informing tourists about Malaysia's attractions, accommodation choices, and activities. Additionally, interactive maps, feedback systems, and tourist insights have been made possible by 3D design technology, making it easier for tourists to organize their trips and discover Malaysia. In conclusion, the use of 3D design in Malaysian digital tourism has created new opportunities for captivating and interactive showcasing of the nation's cultural history, natural wonders, and tourist attractions. The promotion of Malaysia as a major vacation destination has been aided by the extensive use of 3D design technology in advertisement movies, interactive maps, VR experiences, and AR applications.

2.1.1 Tourism

The movement of people across nations or locations outside of their typical environment for personal, business-related, or professional reasons defines tourism, according to the World Tourism Organisation (UNWTO, 2022). They refer to these people as visitors. Tourism is a broad term that includes individuals traveling to and staying in locations outside of their normal environment for business, leisure, or other reasons. With trillions of dollars in annual earnings, it is one of the biggest and fastest-growing sectors in the world. Domestic tourism and international travel are the two primary categories of tourism. Travel within a nation is known as domestic tourism, but travel abroad is known as international tourism. Traveling can be done for a variety of reasons, such as experiencing other cultures, seeing new places, having fun, going to events, and visiting friends and family.

2.1.2 Digital Tourism

Digital tourism refers to the use of technology to plan, book, and enjoy travel. It includes using websites, apps, social media, and other online resources to learn about potential travel destinations, reserve hotels, and flights, and discover things to do while on vacation. The industry of digital tourism is expanding quickly and is predicted to do so in the future. The aviation, travel, and tourist industries are predicted to be worth up to USD 305 billion in profits between 2016 and 2025, according to the World Economic Forum's Digital Transformation Initiative (Bijlani, 2021). This is brought on by a variety of causes, such as the rising usage of social media, the popularity of online travel agents, and the expanding affordability of VR and AR technologies. With increased accessibility and technological advances, digital tourism has grown in popularity. It provides several advantages and opportunities for both destinations and travelers.

Firstly, virtual tours with 360-degree photographs and films make it possible for tourists to take virtual tours of various locations. Travelers can explore well-known landmarks, museums, natural wonders, and other tourist destinations while experiencing the surroundings virtually.

Secondly, virtual reality (VR) and augmented reality (AR) technologies are being used to improve the digital tourism experience. Users can utilize augmented reality (AR) to add digital information to real-world environments, such as historical details or tourist attractions. The creation of fully immersive virtual environments through VR, on the other hand, allows travelers to discover and interact with destinations more authentically and interestingly. As an example, there are times when visitors are unable to experience the true appeal of Changbai Mountain due to the regularly changing climate and difficult geography. Tourists can use augmented reality (AR) technology to learn more about Changbai Mountain's formation history in addition to admiring its beauty (Guo et al., 2014).

As a result of the growth of digital tourism, travelers can quickly get specific information about destinations, such as accommodation alternatives, transit options, nearby attractions, and reviews. By enabling travelers to make informed choices and adjust their plans, this knowledge can help with trip planning.

Lastly, through cultural and educational experiences, travelers in digital tourism can learn about the traditions, history, and culture of numerous destinations. People can explore and learn about the heritage and art of different parts of the world through online exhibitions, virtual museums, and cultural archives, promoting cultural appreciation and understanding.

2.2 Digital Tourism in Malaysia

Malaysia is a popular travel destination, and to attract more travelers, digital tourism is becoming more and more essential. The Malaysian government has made significant investments in digital tourism, and the country has implemented a variety of initiatives to promote the tourism sector, such as the Malaysia Tourism Promotion Board (MTPB), which has a specific division for digital tourism that oversees developing and implementing digital tourism initiatives. A few measures have been put in place by the Malaysian Ministry of Tourism, Arts, and Culture to promote digital tourism, including the development of a mobile app and the launch of a national tourism website.

There are some applications of digital tourism in Malaysia, such as travelers' ability to reserve flights, hotels, and activities online through online travel agencies (OTAs) like Agoda and Booking.com. Travelers are given access to easier and easier trip planning tools through OTAs, and Malaysia is now a more accessible and affordably priced travel destination. To advertise Malaysia as a travel destination, hotels, tourism boards, and other companies use social media sites like Facebook, Twitter, and Instagram. For reaching a large audience and sparking interest in a location, social media may be an effective e-tool. Virtual Reality (VR) and Augmented Reality (AR) have the potential to completely transform how people experience travel, but they are still in the early stages of development. While AR apps can place information about a location in the real world, VR headsets can let people virtually travel to a location without ever leaving their homes.

The Malaysian government is also spending money on online travel. The Malaysia Smart Tourism The 4.0 initiative was launched by Tourism Malaysia in 2018 to advance the sector by utilizing opportunities provided by the digital era. YB Dato' Seri Mohamed Nazri Abdul Aziz, Minister of Tourism and Culture, said that the Smart Tourism 4.0 initiative is a key development and game-changer that will transform our tourism industry and take us to the next level". The future of tourism in Malaysia includes an important amount of digital tourism. Malaysia can grow its economy, create more jobs, and attract more tourists by embracing digital technologies.

3 RESEARCH METHODOLOGY

A case study methodology is utilized to carry out the objective of the study, in which the researcher investigates the medium that is used in digital tourism in Malaysia to figure out if the 3D design is suitable to be implemented in digital tourism.

4 FINDINGS

Table 1 Medium used for digital tourism in Malaysia

No.	Data	Year	Photography	Videography
1	Visit Malaysia Year 2014	2013		✔
2	Malaysia Truly Asia	2015		✔
3	by @malesiaphoto	2018	✔	
4	by @st.cam	2019	✔	
5	by @nazahery	2020	✔	
6	Cuti Cuti Malaysia	2020		✔

7	 by @ch_flora_park	**2021**	✓	
8	 by @ammar.salehan	**2022**	✓	
9	 DREAM MALAYSIA - Tioman, Pahang	**2022**		✓
10	 The Soul of Malaysia (Malaysia Truly Asia)	**2023**		✓

As presented in Table 1, where the researcher collects data from official Tourism Malaysia social media, which are the mediums used in digital tourism, still images and videography are equally used in digital tourism in Malaysia. The integration of 3D design in digital tourism is not well used in Malaysia.

5 CONCLUSION

To conclude, the data presented in the previous area shows that the integration of 3D design is not being implemented for any purpose in the tourism sector. Most of the mediums that were used for digital tourism were photography and videography to promote potential tourist spots. In addition, the content developed and presented shows cultural heritage as well as a cinematic view of landscape spots. in which the researcher would propose the integration of a 3D design view with the local attraction spots to attract and give different views that would target travelers instead of tourists. This is to ensure that the local favorite spots are kept in 3D and digital view for future reference.

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AUTHOR CONTRIBUTIONS

Nor Khalidah binti Noor Hishamuddin developed the study and case study, and Sharkawi Che Din and Nur Aniza Binti Mohd Lazim examined the intonation and clarity of the language used in this paper.

CONFLICT OF INTEREST

There are no conflicts of interest.

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